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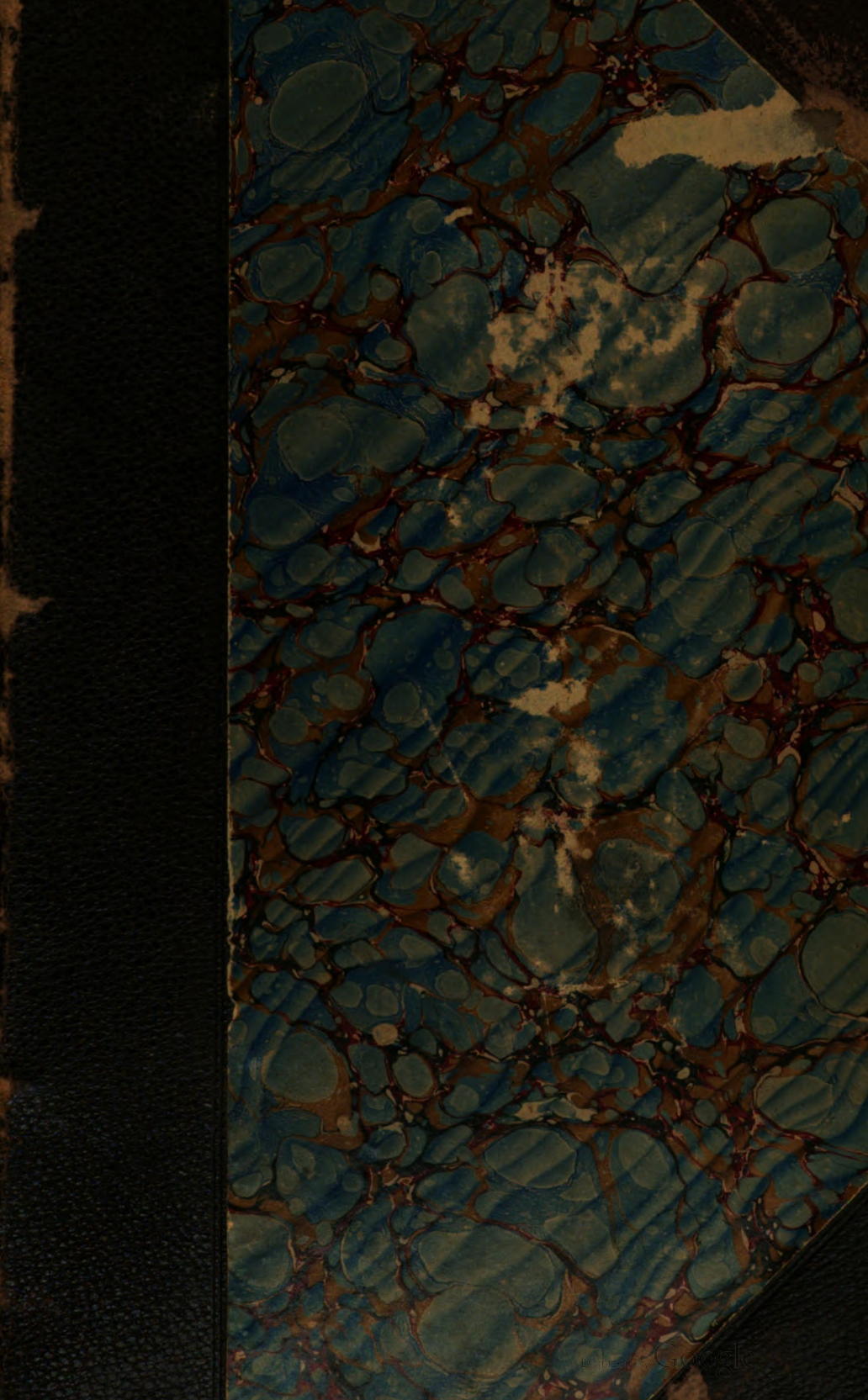
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10 May - 12 Aug. 1899.



CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

VOL. LX.

Nos. 224, 225, 226, AND 227.

MAY, JUNE, JULY, AND AUGUST, 1899.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1899.

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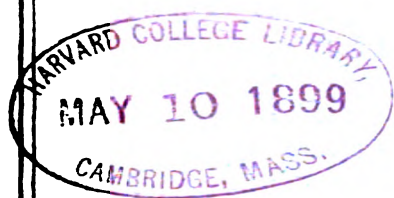
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1899, May 10 - Aug. 12.

Vol. LX.

No. 224.

CONSULAR REPORTS.



MAY, 1899.

COMMERCE, MANUFACTURES, ETC.

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WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1899.

PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:
I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled **SPECIAL CONSULAR REPORTS**. There are now the following **SPECIAL CONSULAR REPORTS**:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries.

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries.

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour.

Vol. 11 (1894).—American Lumber in Foreign Markets.

Vol. 12 (1895).—Highways of Commerce.

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Of these **SPECIAL CONSULAR REPORTS**, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Highways of Commerce, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., and Tariffs of Foreign Countries are exhausted, and no copies can be supplied by the Department.

Of the monthly **CONSULAR REPORTS**, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving **CONSULAR REPORTS** regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

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VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to \$20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to April 1, 1899, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891-95 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

X VALUES OF FOREIGN COINS AND CURRENCIES.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic*.	Gold and silver..	Peso.....	\$0.96, 5	Gold—Argentine (\$4.82, 4) and ½ Argentine; silver—peso and divisions.
Austria-Hungary†....	Gold	Crown.....	.20, 3	Gold—20 crowns (\$4.05, 2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19, 3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54, 6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	do	Dollar.....	1.00	
British Honduras.....	do	do	1.00	
Chile.....	do	Peso.....	.36, 5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	do	Colon.....	.46, 5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver..	do	.92, 6	Gold—doubloon (\$5.01, 7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26, 8	Gold—10 and 20 crowns.
Egypt.....	do	Pound (100 piasters).	4.94, 3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	do	Mark.....	.19, 3	Gold—10 and 20 marks (\$1.93 and \$3.85, 9).
France	Gold and silver..	Franc.....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23, 8	Gold—5, 10, and 20 marks.
Great Britain.....	do	Pound sterling...	4.86, 6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19, 3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	do	Gourde.....	.96, 5	Silver—gourde.
Italy.....	do	Lira	.19, 3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan ‡.....	Gold	Yen	.49, 8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin.....	.49, 2	Gold 10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01, 4	Gold—\$2 (\$2.02, 7).
Portugal.....	do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia ¶.....	do	Ruble.....	.51, 5	Gold—imperial (\$7.718) and ½ imperial (\$3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19, 3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26, 8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04, 4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Gold	Peso.....	1.03, 4	Gold—peso: silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19, 3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed.

† The gold standard was adopted October 1, 1892. (See CONSULAR REPORTS No. 147, p. 623.) Values are still, however, frequently expressed in the florin or guilder, which is worth 2 crowns or 40.6 cents.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ See note to table of fluctuating currencies.

¶ For an account of the adoption of the gold standard, see Review of the World's Commerce,

B.—Countries with fluctuating currencies, 1874-1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*.	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.39,8
Bolivia.....	do.....	Dollar until 1890; boliviano thereafter.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6		
China.....	Silver.....	Haikwan tael.	1.61	1.61				
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†.....	Gold.....	Pound (100 piasters).			4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7	.99,7		
	Silver.....						.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2		
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver.....	Florin.....	\$0.39,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; boliviano thereafter.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....				.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....			.99,7	.99,7	.99,7	.99,7
	Silver.....		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

XII VALUES OF FOREIGN COINS AND CURRENCIES.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1896.				1897.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2
Central America.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,5	.44,3	.41,2
China.....	Amoy tael.....				.79,3	.76,7	.75,7	.71,7	.66,4
	Canton tael.....				.79	.76,5	.75,5	.71,5	.66,4
	Chefoo tael.....	.75,9	.76,3	.76,9	.75,8	.73,3	.72,4	.68,6	.63,7
	Chinkiang tael.....				.77,4	.74,9	.73,9	.70	.65,1
	Fuchau tael.....				.73,3	.70,9	.70	.66,3	.61,6
	Haikwan tael.....	.80,8	.81,2	.81,9	.80,6	.78	.77	.73,1	.67,8
	Hankau tael.....				.74,2	.71,7	.70,8	.67,1	.62,3
	Ningpo tael.....				.76,2	.73,7	.72,8	.68,9	.64
	Niuchwang tael.....				.74,3	.71,9	.71	.67,2	.62,5
	Shanghai tael.....	.72,5	.72,9	.73,5	.72,4	.70	.69,1	.65,5	.60,8
	Swatow tael.....				.73,2	.70,8	.69,9	.66,2	.61,5
	Takao tael.....				.70,8	.77,2	.76,2	.72,2	.67
	Tientsin tael.....	.76,9	.77,3	.78	.76,8	.74,3	.73,4	.69,5	.64,6
Colombia.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Ecuador.....	do.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
India.....	Silver rupee.....	.23,3	.23,4	.23,6	.23,3	.22,5	.22,2	.21,1	.19,6
Japan.....	Silver yen.....	.52,9	.53,2	.53,2	.52,8	.51,1	.50,5		
Mexico.....	Silver dollar.....	.53,3	.53,6	.54	.53,2	.51,5	.50,8	.48,2	.44,6
Persia.....	Silver kran.....	.09	.09,1	.09,2	.09	.08,7	.08,6	.08,2	.07,6
Peru.....	Silver sol.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Russia.....	Silver ruble.....	.39,3	.39,5	.39,8	.39,2	.37,9	.37,4		
Tripoli.....	Silver mahbub.....	.44,3	.44,5	.44,9	.44,2				

Countries.	Monetary unit.	1898.				1899.	
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.
Bolivia.....	Silver boliviano.....	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6	\$0.43,9	\$0.43,4
Central America.....	Silver peso.....	.41,4	.40,9	.41,8	.43,6	.43,9	.43,4
China.....	Amoy tael.....	.68,5	.66,2	.67,6	.70,6	.71	.70,2
	Canton tael.....	.68,3	.66	.67,4	.70,4	.70,8	.70
	Chefoo tael.....	.65,5	.63,3	.64,6	.67,5	.67,9	.67,2
	Chinkiang tael.....	.66,9	.64,6	.66	.69	.69,3	.68,6
	Fuchau tael.....	.63,4	.61,2	.62,5	.65,3	.65,6	.65
	Haikwan tael.....	.69,7	.67,3	.68,8	.71,8	.72,2	.71,4
	Hankau tael.....	.64,1	.61,9	.63,2	.66	.66,4	.65,7
	Ningpo tael.....	.64,3	.63	.65	.67,9	.68,2	.67,5
	Niuchwang tael.....	.65,9	.62	.63,4	.66,2	.66,5	.65,9
	Shanghai tael.....	.62,6	.60,4	.61,7	.64,5	.64,8	.64,1
	Swatow tael.....	.63,3	.61,1	.62,4	.65,2	.65,5	.64,9
	Takao tael.....	.66	.66,6	.68	.71	.71,4	.70,7
	Tientsin tael.....	.66,4	.64,1	.65,5	.68,4	.68,8	.68
Colombia.....	Silver peso.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4
Ecuador.....	do.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4
India*	Silver rupee.....	.20,1	.19,1	.19,9	.20,7	.20,8	.20,6
Mexico.....	Silver dollar.....	.46	.44,4	.45,4	.47,4	.47,7	.47,2
Persia.....	Silver kran.....	.07,8	.07,5	.07,7	.08	.08,1	.08
Peru.....	Silver sol.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4

* The commercial value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal.....	4.422 gallons.
Ardeb.....	Egypt.....	7.6907 bushels.
Are.....	Metric.....	0.02471 acre.
Arobe	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3175 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba.....	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid).....	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine.....	Russia.....	28 inches.
Arshine (square).....	do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7,096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Cafiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333½ (1½) pounds
Do*.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	117.5 pounds.
Do.....	Darmstadt.....	110.24 pounds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zöllverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin."
avoirdupois.

Among merchants in the treaty ports it equals 1.333½ pounds

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Siam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square).....	8.077 square feet
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2.6997 acres.
Do.....	Spain.....	1.599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures....	(See CONSULAR REPORTS NO. 144)	
Fanega (dry).....	Central America.....	1.5745 bushels.
Do.....	Chile.....	2.575 bushels.
Do.....	Cuba.....	1.599 bushels.
Do.....	Mexico.....	1.54728 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7.776 bushels.
Do.....	Uruguay (single).....	3.888 bushels.
Do.....	Venezuela.....	1.599 bushels
Fanega (liquid).....	Spain.....	16 gallons.
Feddan.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2.506 quarts.
Do.....	Mexico.....	2.5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons.
Garnice.....	Russian Poland.....	0.38 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2.471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1.422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2.2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4.9729 bushels.
Korree.....	Russia.....	3.5 bushels.
Last.....	Belgium and Holland.....	85.134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	11½ bushels.
Do.....	Spain (salt).....	4.760 pounds.
League (land).....	Paraguay.....	4.633 acres.
Li.....	China.....	2.115 feet.
Libra (pound).....	Castilian.....	7.100 grains (troy).
Do.....	Argentine Republic.....	1.0127 pounds.
Do.....	Central America.....	1.043 pounds.
Do.....	Chile.....	1.014 pounds.
Do.....	Cuba.....	1.0161 pounds.
Do.....	Mexico.....	1.01465 pounds.
Do.....	Peru.....	1.0143 pounds.
Do.....	Portugal.....	1.011 pounds.
Do.....	Uruguay.....	1.0143 pounds.
Do.....	Venezuela.....	1.0161 pounds.
Liter.....	Metric.....	1.0567 quarts.
Livre (pound).....	Greece.....	1.1 pounds.
Do.....	Guiana.....	1.0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.727 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1403 miles.
Morgen.....	Prussia.....	0.63 acre.
Oke.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	21¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.102 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5¾ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Secr.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1.6 quarts.
Standard (St Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suete.....	Uruguay.....	2,700 cuadras (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	590.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curaçao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Vergees.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
 Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
 Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
 Gram equals 15.432 grains.
 Decagram (10 grams) equals 0.3527 ounce.
 Hectogram (100 grams) equals 3.5274 ounces.
 Kilogram (1,000 grams) equals 2.2046 pounds.
 Myriagram (10,000 grams) equals 22.046 pounds.
 Quintal (100,000 grams) equals 220.46 pounds.
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
 Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
 Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
 Liter equals 0.908 quart.
 Decaliter (10 liters) equals 9.08 quarts.
 Hectoliter (100 liters) equals 2.838 bushels.
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
 Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
 Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
 Liter equals 1.0567 quarts.
 Decaliter (10 liters) equals 2.6418 gallons.
 Hectoliter (100 liters) equals 26.417 gallons.
 Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
 Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
 Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
 Meter equals 39.37 inches.
 Decameter (10 meters) equals 393.7 inches.
 Hectometer (100 meters) equals 328 feet 1 inch.
 Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
 Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
 Are (100 square meters) equals 119.6 square yards.
 Hectare (10,000 square meters) equals 2.471 acres.



CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

Vol. LX.

MAY, 1899.

No. 224.

COMMERCE AND INDUSTRIES OF BRAZIL.

Mr. Henry White, secretary of the embassy at London, sends, under date of February 18, 1899, copies of a report by Mr. Worthington, commissioner of the Board of Trade to South America, on trade conditions in Brazil.* Extracts from the report follow:

Rio de Janeiro, the federal capital of the United States of Brazil, with a population, according to the last census (1890), of 522,651, is not only by far the largest town in Brazil, but is the most important commercial center and largest port of entry in the whole country. It is naturally the chief center of the import trade for southern tropical Brazil, although São Paulo, with the port of Santos, seems to be rapidly taking an increased share of the business.

In proceeding to study the import trade and native manufacturing business here, I have been met at the outset by the fact that there are no actual import returns available, nor any of national manufactures.

What would have been of most service in studying the trade in this part of Brazil would have been figures showing the imports into Rio and Santos; but, with the exception of those kept by the *Jornal do Commercio*, taken from the manifests of vessels entering Rio day by day, and published in the *Jornal's* annual *Retro-spectivo*, I have found nothing here; these figures are useful as far as they go, but they only cover a few special articles. The figures for the whole country, published by the Government, only come down to 1894, and, for reasons referred to later on in reference to custom-house matters, can not, I am assured, be regarded as quite accurate.

By the courtesy of the editor of the *Brazilian Review*, however, I have obtained

* Mr. Worthington's reports on Chile and Argentina were printed in *CONSULAR REPORTS* No. 222 (March, 1899), p. 482.

the following statistics for the whole of Brazil (which have not yet been published in extenso), taken from the export returns of the several countries named, viz:

Country.	1893.	1894.	1895.	1896.	1897.
Great Britain.....	\$38,800,000	\$37,900,000	\$36,900,000	\$33,900,000	\$27,600,000
France.....	20,800,000	23,300,000	22,800,000	20,400,000	16,500,000
Germany.....	16,000,000	15,000,000	18,900,000	14,800,000	12,100,000
Belgium.....	6,800,000	4,300,000	8,200,000	10,600,000	4,800,000
Austria.....	700,000	800,000	1,000,000	1,200,000	Not stated.
Italy.....	Not stated.	1,000,000	3,000,000	2,500,000	Not stated.
Portugal.....	8,200,000	6,800,000	7,700,000	7,200,000	5,800,000
United States.....	12,300,000	13,800,000	15,100,000	14,200,000	12,400,000
Argentina.....	10,600,000	13,100,000	7,700,000	9,200,000	8,300,000
Uruguay.....	5,300,000	8,200,000	6,800,000	7,200,000	5,800,000
Total.....	117,500,000	124,200,000	122,100,000	121,200,000	93,200,000

NOTE.—The above figures, stated in the original in pounds sterling, are given in the equivalent values (round numbers) in United States currency. The German figures relate to German products only; the others include the transit trade. The figures for the United States (which relate to the fiscal years) have been corrected.

The import trade is in many hands. A large, and I am disposed to think increasing, proportion of it is done direct by means of travelers or local representatives of European manufacturers. Some idea of the importance of the business done in this manner may be had from considering that the total of European (and American) collections by drafts through Rio de Janeiro alone, based on figures I have obtained from the five leading non-Brazilian banks, must have amounted to something like £2,500,000 to £3,000,000 last year, whilst a very large sum must be added to represent the business done in account current, that is, where the buyers are allowed to remit more or less as they are able.

National industries are fostered by the protective tariff, and their products form in some lines the most serious competitors with imports; but in others, they do not appear to flourish, or are more or less dependent on the condition of exchange. The largest and most developed of these industries is that of manufacturing the raw cotton of the country.

The usual terms of payment are, in the dry-goods trade, four to six months from end of month; and in the hardware trade, ninety days from end of month; but four months is, I am told, given by some merchants importing on their own account. In account current, direct business terms of payment are very elastic, as already intimated, and probably in some lines none of our competitors make them more so than do British shippers; indeed, I have been told the latter are practically the only ones working on this system in dry goods. Indents given to merchants here are usually on the basis of cash in ninety days from arrival of goods from Europe, or sixty days and sometimes thirty days from the United States. National factories generally sell at ninety days.

Exchange has fluctuated so much this year (namely, from about 7d. at the beginning to 5½d. in April and May, to 7¾d. at the date of my arrival here, and from that again up to 8½d. on the 10th instant, whilst at the date of this letter it is 8½d.) that import business has been much interfered with. In addition to this, the very low price of coffee, the chief product of this part of Brazil, makes the people poor and reduces demand to a minimum. The rapid rise in exchange must be kept in view in connection with currency prices in this report, for it makes it difficult to tell on what basis of exchange sales or quotations were really made.

The custom-house, while at present giving no advantage in any way to the products of one country over those of another, presents some difficulties. For one thing,

changes are liable to be made somewhat arbitrarily and at short notice. A large importer put it to me, perhaps rather strongly, by saying that "one may study the custom-house tariff and custom-house laws thoroughly, and then find something one had not noticed to upset one's calculations, or something one had relied upon revoked." Again, while efforts have been made from time to time to abolish abuses in the collection of the customs, and the best intentions must be credited to the higher authorities and many of the officials in regard to the same, yet, owing to circumstances it is needless to dilate upon here, it must, I fear, be admitted that the practical working of the custom-house, although doubtless much better here than in the outports, is not all it should be as a medium for collecting the revenue according to the tariff; and that, as a consequence, it is liable to produce at times an unfair species of competition, at least in some trades. I refer to the additional report of the Finance Minister for last year in evidence of this, and I mention it because it undoubtedly has an effect upon business in certain lines, whilst it must also detract from the value of any statistics based on custom-house returns. Merchants established here can have their own clerks to dispatch their goods, giving the Government a guaranty with them; but otherwise an authorized "despachante" (sworn custom-house broker), working at an established tariff of charges, must be employed. Too much care can not be exercised in complying with all custom-house requirements in regard to the documentation of goods. Custom-house store rent is rather heavy; I annex a statement in regard to goods liable to it, etc., which shows the method of charging the same.

ARMS AND AMMUNITION.

Revolvers are American (Smith & Wesson), with cheap Belgian and American imitations. Spanish-made imitations of Smith & Wesson's revolvers are also sold, and are very cheap; I saw one marked "New York," and with a horsehead on the handle, said to have cost $7\frac{1}{2}$ francs (\$1.45). Another marked "Smith & Wesson's cartridges will be found to fit best this revolver," and with some initials on the handle, said to have cost 14 francs (\$2.70). The sale of revolvers, however, is probably not one-twentieth that of small double-barreled pistols, which come from Belgium. Shotguns from Belgium also prevail, the prices being very much cheaper than English; for example, I saw a Belgian gun said to cost 105 francs (\$20.27), less 10 per cent and 5 per cent, of the same pattern as an English gun costing £21 (\$102.20), less 20 per cent and 5 per cent. Nevertheless, a small number of English guns are imported for those who care to pay for them.

Gunpowder is made in the country; but the local product apparently only supplies a portion of the demand, notwithstanding that, owing to the overstocking of imported powder, none has been coming from abroad for a considerable time. Imports have been both English and German or Belgian. Mining powder is all made in the country, as powder so made can be sold, it is said, for about the amount of the duty payable on importations.

Cartridges for revolvers and pistols are imported loaded. Pistol cartridges used to come from England; but the French make, with the flat, instead of convex, percussion cap has now taken their place and sells at about the same price, viz, 70 to 75 milreis per thousand.* German imitations are said to be offered at less than half this price. Empty shot cartridges are imported from France.

Shot is made in the country, but is of poor quality. The Newcastle chilled shot is liked best, but a cheaper American product is now coming and winning its way to favor. The makers of this shot, it may be remarked, send buyers a beautifully got up sample case, about 15 by 4 by 2 inches, with samples of the various sizes in glass tubes; this is said to be, as will be readily understood, a vast assistance to sales.

*On the date on which the report was written, the milreis was worth 17.23 cents.

The Government make their own powder to a large extent, but obtain their other supplies of ammunition and war material either through their own commissioner in Europe or through agents here of the large ordnance, etc., makers.

BAGS (EMPTY).

Hessian bags for coffee are made in the country from imported jute yarn, the industry being protected by a duty of 1 milreis per kilogram on the bags and 750 reis per kilogram on hessian cloth, against 100 reis* per kilogram on jute yarn.

BEER AND ALE.

The national breweries, worked either on the German or American plan, now practically supply the demand, a comparatively trifling quantity of specialties being all that is imported. The following figures, showing the imports for three years into Rio, may be of interest:

Imported from—	1895.	1896.	1897.
	<i>Cases.</i>	<i>Cases.</i>	<i>Cases.</i>
The United Kingdom.....	6,136	1,672	1,711
Germany.....	38,818	3,373	924
Belgium and other countries.....	9,309	2,225	410
Total.....	54,263	7,270	3,045

CARRIAGES AND WAGONS, RAILWAY.

The United States has, I understand, heretofore been the chief purveyor of these. A certain amount of building is done by the railway companies, importing what raw or partly manufactured material—such as axles and steel tires, special fittings, etc.—they require, and there is also a national factory which builds railway carriages.

CEMENT.

Formerly, a large business was done in English cement; but now the great bulk of the trade is Belgian and German makes. The latter, although admittedly inferior in quality, can be sold at 15 milreis (\$2.58) per barrel, against about 24 milreis (\$4.14) which would be required for the English at the advanced price recently put upon it. Continental shippers have also an advantage usually in sailing freights, weight cargo being scarcer from their ports than from British.

Cement comes in barrels weighing 150 kilograms (331 pounds) gross and is sold per barrel; duty is 20 reis per kilogram on gross weight, less a tare of 10 per cent.

COAL.

The strike in the South Wales colliery districts gave a great incentive to the efforts being made to introduce Pocahontas and other American coal here to replace Cardiff coal, and, had it not been for the Spanish-American war occurring about the same time, the result would have been more apparent. As it was, however, several cargoes of American coal actually came, and, moreover, one was consigned to the largest dealer in the place, and another to one of the largest European steamship lines. The cost of these two cargoes is reported to have been 6s. 6d. (\$1.70) per ton f. o. b., and freight 21s. (\$5.11) in the one case and 18s. (\$4.38) in the other. Great efforts are being made, I am told, to capture the railway orders.

England has had all the coal trade in Brazil heretofore (except for a small amount of soft native coal in Rio Grande and some American gas coal), and the import amounted last year to 532,437 tons to this port alone.

* 1,000 reis = 1 milreis; 10 per cent of the duties is payable in gold.

CORDAGE AND TWINE.

Cordage for marine uses is mostly imported from England; there is some United States competition, and for use on a winch the American rope is said to be preferred, as being drier and slipping less. For general uses—agricultural, roping bales, tying mule packs, parcel string, etc.—national factories supply the market. They use chiefly Madras "sunn" hemp. Seaming twine for sewing the coffee bags used to be all imported, but is now largely made locally from Italian tow (*Festuca pitinata*).

CEREALS.

Wheat comes in free of duty and is a large article of import. I have seen no complete statistics of the imports, but the following figures of receipts (in tons) by the two large mills in this city—one British and the other national—may be of interest, as they cover, probably, the major portion of the trade, viz:

Imported from—	1895.	1896.	1897.
	Tons.	Tons.	Tons.
River Plata.....	(*)	(*)	57,180
United States.....	(*)	(*)	21,614
Total.....	59,321	82,156	78,794

* Not separated; United States quite trifling.

Wheat flour is partly imported and partly ground (chiefly in the two mills above referred to) from imported wheat. The figures as to the imports into Rio are as follows, viz:

Imported from—	1895.	1896.	1897.
	Barrels.	Barrels.	Barrels.
United States.....	291,060	267,907	252,991
River Plata.....	136,969	106,144	65,797
England.....			9,850
Austria.....	3,580	1,435	4,395
Chile.....		449	3,500
Total.....	431,609	375,935	336,533

The output of the two mills referred to, in barrels of 90 kilograms each,* was: In 1895, 447,202 barrels; 1896, 607,700 barrels; 1897, 584,707 barrels.

Maize used to be imported largely from the River Plata, but this year, the import has fallen off to a comparatively small figure, more being now grown in the country. The fall in coffee prices has demonstrated to agriculturists here the danger of having all their eggs in one basket.

COTTON MANUFACTURES.

In white piece goods, practically the only competitors of British manufactures are national. The most salable qualities are:

Boquet das Moças—24½ inches wide; weight, 1,270 grams† per piece; price, 6.800 milreis (\$1.15) per piece.

Fim de Seculo—28 inches wide; weight, 1,600 grams per piece; price, 9 milreis (\$1.53) per piece.

* Flour is packed here in sacks of 45 kilograms (99 pounds); 90 kilograms=198 pounds.

† 1 gram=0.035 ounce.

Dos Presidentes—30 inches wide; weight, 1,690 grams per piece; price, 8.800 milreis (\$1.49) per piece.

Percale BBB—30 inches wide; weight, 1,510 grams per piece; price, 9.600 milreis (\$1.63) per piece.

Pinga Fina—31½ inches wide; weight, 2,210 grams per piece; price, 11.600 milreis (\$1.97) per piece.

Cretonne Excelsior—31 inches wide; weight, 2,440 grams per piece; price, 10.400 milreis (\$1.76) per piece.

Gata—30 inches wide; weight, 1,920 grams per piece; price, 9.200 milreis (\$1.56) per piece.

Flores—27½ inches wide; weight, 1,550 grams per piece; price, 8.400 milreis (\$1.42) per piece.

It will be observed that whites are usually made in pieces of 20 meters (21.8 yards).

Cotton flannels have dropped out of use to a great extent, being replaced by woolen fabrics made chiefly in the southern provinces.

Gray cottons are almost entirely of national make, although doubtless the recent rise in exchange will bring some from England.

Prints are produced successfully in the country, but it is naturally impossible for national factories to undertake the immense variety of patterns offered from abroad, and therefore there is still a large sale of imported printed fabrics. In these, the competition with English is not important; it is mostly in dark grounds.

In wove colored goods—ginghams, oxfords, trouserings, zephyrs, etc.—the national factories supply a large proportion of the demand, and, owing to the excellence of the cotton used, it is difficult for imported goods to compete, except in some poor makes for which there is not a great requirement; nevertheless, imported goods do compete, at least in certain lines, and Italian goods are noted as coming particularly to the front.

In blue drills, the American "S" mark holds its own (in virtue of the mark) against similar English goods. National goods also compete favorably. One class of the latter, 27 inches wide, weighing 164 grams per meter, sells at 1.100 milreis (18.7 cents) per meter. The excellence of the dye is to be noted.

FURNITURE.

With a good supply of native hard wood of various kinds and a high protective duty, it is not surprising that most of the furniture used in the country is made locally. The only importations possible seem to be cheap chairs which come from the United States and bent-wood furniture from Austria.

GLASS.

Supplies of plate glass seem to come almost entirely from the Continent, although some business still exists with England. A business man of long experience in the country told me that some years ago, when the shop windows were still largely of common glass, foreseeing the change which must inevitably come about in the use of plate glass, he arranged an agency for large English makers with a first-class local house. The efforts of the latter, however, were unavailing against Belgian competition and were not properly backed by the manufacturers, who should have been prepared in the first instance to make prices in order to capture the trade, as the Americans so often do in similar cases.

Lamp ware is chiefly German and Belgian. Some lamps are so far of native production that the bodies, shades, and chimneys are made at the glass factory above referred to, the fittings only being imported.

HARDWARE AND CUTLERY.

In cast-iron hollow ware, there has not hitherto been any competition with the English article, the retinned being mostly sold for upcountry and the enameled for town use. Recently, however, some cast-iron hollow ware has been sold in the market which is said to be a German imitation. In wrought-iron ware, retinned, the French make appears to hold its own for kitchen utensils, and the mark is so well known that cheaper English goods, I am told, have not been able to compete. Large retinned basins, however, come from England. Enameled ware is mostly German.

Door locks, which are made by the country folk in Portugal in their houses during the winter months, have a large sale. It was contemplated at one time to make these locks in a large iron works here, and special machinery was imported for the purpose. It has, however, never been started, the opinion of the present management being against the prospect of successful competition. A 5-inch Oporto lock sells here at 1.250 milreis (21 cents); a 6-inch, at 1.100 milreis (18 cents).

Padlocks of English make are said to have the largest sale, but cheaper German makes are also freely sold.

Large flat hinges for gates are English, but bright door hinges are chiefly of German and American make. A German "American" iron hinge costs as follows, placed in port of shipment:

	Marks.
2½ inches.....per dozen...	0.72=\$0.17
2¾ inches.....do.....	.83= .20
3 inches.....do.....	.95= .23
4 inches.....do.....	1.90= .45

The bulk of the table cutlery is reported to be English, as well as the bulk of the pocket cutlery, although of this latter, there is a large proportion (consisting chiefly of cheap German goods on cards) imported elsewhere than from the United Kingdom. Large German scissors are said to sell well.

A large dealer and importer of small hardware remarked to me upon the trouble taken by German hardware travelers, of whom he saw many more than of English, and upon the "get up" of the Germans' sample cards—with the importers' names on them. He also spoke of the care bestowed on German packing of small orders, *i. g.*, in assorting them so as to make the freight as cheap as possible, and also of their clear and full invoicing.

HATS OF ALL SORTS.

Wool and felt hats are extensively made in the country; common soft wool hats are, in fact, almost entirely so, and I understand that probably 80 to 90 per cent of the soft hair-felt hats are also made here; but of the hard hats (a comparatively small trade) the great majority, perhaps 80 per cent, are imported from England.

A manufacturer here, whose works I visited, told me that travelers came regularly from two continental houses, who sold nothing but hat furnishings (sheep-skin linings, linings for crowns, silk bindings, etc.), besides travelers from continental houses selling other goods apart from hat furnishings, but that he never saw an English traveler with the latter, although he has done some business with England. He remarked that there were great difficulties in doing business with English houses; first, he said, there was the difficulty of money, weights, and measures, all different from the decimal and metric system that people here are accustomed to; second, there was a want of clear explanatory details in invoices; third, a failure to attend to tariff requirements, such as giving net weights of different articles separately, giving weights with cardboard included as well as net when required, and

giving gross weights of the separate cases, in kilograms; and fourth, there was the inferiority of the packing cases used. German and French cases always arrived in good condition, whereas English cases came badly broken.

Straw hats for sale in the towns are generally of light French or German makes, which are found the most suitable. There is a national factory for making these hats from imported straw; this came to grief after, it is said, having sold steadily at too low prices; but it is possible this factory may be resuscitated.

Rough straw hats made in the country of native straw and grass have a very large sale for workmen. A serviceable hat of this kind sometimes costs as little as 300 reis (5 cents).

IMPLEMENTS AND TOOLS OF INDUSTRY.

Spades and shovels come largely from the United States, and axes almost entirely; but English hoes still hold their own.

Wheelbarrows are also imported from the United States, and compete with barrows made locally upon the American model.

Carpenters' tools are largely imported from Germany. A German brace, with the twenty-four bits to correspond, sells here at 5 milreis (85 cents). A German screw-driver sells here at 4 milreis (68 cents) per dozen for assorted sizes—3, 4, 5, and 6 inches. A German handsaw, 16 inches, packed six together in paper, costs per dozen, free in port of shipment, as follows:

Sizes.	Price.		Sizes.	Price.	
	Marks.			Marks.	
14 inches.....	7.80	\$1.826	26 inches.....	14.30	\$3.403
16 inches.....	8.50	1.983	28 inches.....	16.25	3.867
18 inches.....	9.20	2.20	30 inches.....	17.50	4.165
20 inches.....	11.40	2.713	36 inches.....	23.40	5.569
22 inches.....	11.70	2.785	38 inches.....	26.00	6.188
24 inches.....	13.00	3.094			

Hand pumps are imported from America and Germany, besides England. The German especially appear to take well for lightness and cheapness. A "Wing" clock or "Farrington" from Frankfort costs there as follows:

	Marks.
No. 0— $\frac{1}{2}$ -inch piping.....	9.20 = \$2.24
No. 1— $\frac{3}{4}$ -inch piping.....	10.40 = 2.48
No. 2—1-inch piping.....	12.20 = 2.91

To which prices about 8 per cent may be added, to cover packing and freight to Antwerp.

LEATHER.

National tanneries supply the trade almost entirely in sole leather, a very little only being imported from France, and even enameled cowhide for top-boots is now made in the country. All the finer kinds of leather, however, are imported chiefly, I understand, from France; but horse leather, which is largely used, comes from Germany, often ready cut in welts.

National boot and shoe factories, of which there are several equipped with modern machinery, are believed to do the largest share of trade. Imported goods are mostly English. The national factories, I understand, can make a fair boot to sell at 20 milreis (\$3.45), whilst a 12s. (\$2.92) boot in England costs about 28 milreis (\$4.82) to sell.

The import of saddles is practically nil; the better class are made from imported and the lower from native tanned hogskins. A cheap saddle can be bought for 40 milreis (\$6.89); a fair one for 100 milreis (\$17.23).

Bridles, etc., are made in the country to a far larger extent than they are imported, but those of local manufacture are of poorer quality; the imports are chiefly from England.

MACHINERY.

The majority of stationary engines seem to be of British make, but the reverse is the case with regard to locomotives. The reason alleged for the latter being chiefly American, is that the Americans make the most suitable engines for poorly ballasted and new lines, and I have been told in proof thereof that some of the smaller lines, which formerly used British locomotives, have taken to Baldwin's. I am not satisfied that the reason alleged is the correct one, nor that it is a fact; not being an expert, I can not say authoritatively, but what I saw and learned in the Argentine seemed to show that the United States makers are not alone successful in building locomotives for new countries, and, curiously enough, some very fine American locomotives, which were imported here a few years ago, proved too heavy and rigid for the road. It seems to me that one great reason of the success of the Baldwin Company in capturing the trade is their admirable local organization. They have good influential agents and also several engineers of the company always on the spot where they are needed, to attend to complaints, remedy defects, and watch for new requirements. Their locomotives are light and cheap to make. They have a large business in the country, so that they can afford to incur expenses in protecting and extending their trade, as well as to sell on very long credit, and yet accept what seem to be moderate prices.

Probably, the machinery of largest sale in this part of Brazil is that which has to do with the cleaning and preparing of coffee. This is very largely made in the country. For general agricultural machinery, there is not much demand, coffee being practically the one crop of the country; but there are evidences of a change having begun in this respect. Light American plows with wooden handles and reversible shares—for hilly country, costing from 45 to 70 milreis (\$7.75 to \$12.06) each, are the favorites, but a few large and much more expensive iron plows—German and French—are also sold.

Cotton-mill furnishings are somewhat of a specialty, and come mostly from England. A large importer of these complained to me of the frequent bad interior packing—*e. g.*, drop pins came packed in cardboard boxes of 3 gross each, and the boxes, being too weak for this purpose, often arrived broken. Similarly, belt buckles were packed in paper packages of a quarter of a gross each, and out of a consignment of 200 packages recently received, only 1 dozen arrived fit to put on the shelves; they should be in small cardboard boxes.

In electric machinery, the American make has by far the largest sale. It is worth noting in this connection that there is an American electrical expert here, with electrical experts under him, who is well backed by a big American company. He has a shop in the leading street of Rio de Janeiro to show his wares, and is, I am assured, the only man in the place who is prepared to estimate at once for an electrical installation anywhere in the country; others have to write to principals. It is not surprising that, quite apart from considerations of suitability and cheapness of machinery, he does the most business.

IRON.

Pig and puddled are imported principally from England. There is a considerable amount of casting done in the country—only large pieces being imported—and the industry is protected by a duty* of 200 reis per kilogram (3.45 cents per 2.2046

* It should be noted that 10 per cent of the duty is payable in gold.

pounds) on plain castings, 400 reis (6.9 cents) on painted or tinned, and 1 milreis (17 cents) per kilogram on gilt or silvered, against 10 reis per kilogram on pig iron. Puddled bars are imported to only a trifling extent comparatively, and are brought in chiefly to supplement the supplies of scrap available for the one national rolling mill.

The demand for bar, angle, bolt, and rod (including soft steel) is principally confined to the smaller sizes, and the national rolling mill, already referred to, supplies part of this demand (say, up to 3 inches by one-half inch, or 2 inches for square, or 2 inches diameter for round), turning out 250 to 300 tons per month. The import, however, is much larger. Moreover, the duty (100 reis per kilogram) is not such a protection to this industry as the duties on castings are to cast-iron work, and I gather that the returns from the rolling mill are not very satisfactory. Bars for up country have to be bent into 5 or 6 feet lengths for packing on mules, and the bending is largely done here. The iron used is often Swedish, which, notwithstanding that its test is much higher than English or Belgian, is preferred in the interior, because, after it is worn out in its first use, it serves for making into knives, etc., locally. The competition of Belgian iron, of course, affects the sale of English, and is keenly felt, as is likewise the competition of iron from the United States.

The agents for a large English maker of railroad iron of all sorts told me they missed a large contract for the Government railway, a couple of years ago, because their principals insisted upon payment in Europe, whereas the terms of tender required payment here at the exchange of the day of delivery. After exchange of the day of delivery has been settled, it is well known that, owing to official formalities which have to be gone through, an interval of several weeks may elapse before collection, during which exchange may have altered again; hence, the objection to payment here. The contract was, however, taken by a leading German maker, although his price was not so cheap. A heavy loss in exchange ensued, but with diplomatic (German) assistance, the maker obtained compensation.

A contract for 3,000 tons of steel rails for a railway under English management recently went to the United States.

Wire for fencing, both black and galvanized, appears to be mostly Belgian and German; but barbed wire, rolled on wooden bobbins of convenient size, comes from the United States.

Belgian competition tells in hoops, sheets, and boiler plates too, and some importers who have held to the English makers as long as they possibly could, have been recently induced to order Belgian sheets, owing to the great difference of price in their favor—30s. and 40s. (\$7.29 and \$9.73) per ton. They say their buyers will have the cheap stuff, even for boilers.

Galvanized and corrugated sheets are still English.

Tinned plates (from England) are imported for making coffee-sample tins, tins for guava cheese and other sweetmeats, tobacco, etc., probably to the extent of at least 500 cases per month. The tin-making industry is mostly carried on in comparatively small establishments, and I have not seen any very high-class work. The plates are almost all coke; perhaps 5 per cent, I am informed, may be charcoal. The fruit-canning industry does not seem to be large.

Terne plates are imported (also from England) for the national safety-match factories, which all put up their matches in terne-plate cases containing 10 dozen packets of 10 boxes each. These plates are not used for roofing and not much now for guttering, for which purpose galvanized iron is preferred.

Wrought-iron building girders have not hitherto been largely imported, but their use will doubtless increase, and Belgium is to the front with cheap prices.

Iron pipes, both black and galvanized, used all to come from England, but now the United States is a strong competitor; whilst in regard to cocks, joints, T's, etc.,

it is said to be only because people are accustomed to English shapes that so many still come from England. A large importer here told me that the United States makes were lighter (duty is by weight) and cheaper, and he looked forward to buying in the United States later on.

Wire nails (Paris points) are made in the country from imported Belgian wire.

The old English horseshoe nail, which required finishing by the farrier before being used (and the form of which English makers would not change), was replaced a few years ago by the ready-finished German nail, which now holds the market.

Engineers' bolts and nuts, from about 3 inches by half an inch, or $2\frac{1}{2}$ inches by five-eighths of an inch and upwards, are made here, being protected by a duty of 600 reis per kilogram; but coach and cabinet makers' bolts and nuts are largely of continental manufacture. The price of the former, assorted sizes—that is, not all small sizes—is 1,200 milreis (20.7 cents) per kilogram.

Wood screws are now mostly German. A recent sale of these was made thus:

Length, in quarters of an inch.	Thickness, in lines.	Price, per gross.	
		<i>Reis.</i>	<i>Cents.</i>
4	4	380	6.55
4	5	440	7.58
4	6	480	8.27
6	4	480	8.27
6	6	640	11.03
6	9	820	14.03
7	7	750	12.92
7	9	880	15.16
7	10	940	16.10
8	6	720	13.4
8	7	760	14.09
8	9	1,000	17.23
8	10	1,100	18.95
9	10	1,250	21.54
12	12	1,700	29.29

One large commission agent told me that up to two or three years ago, his orders went to England; but when English makers would not raise their discount allowances, he had to send them to the Continent. After a time the English makers, finding they were not receiving his orders, sent out to inquire the reason, and offered to make needful concessions; but, as he says, it is much easier to refuse business than, having once done so, to recover it from buyers who have been made to change and have become accustomed to the change.

BRASS OF ALL SORTS.

Brass hinges appear to be principally German. They cost as follows, per dozen:

	Marks.	Cents.
$1\frac{1}{2}$ inches.....	0. 60	=14. 28
$1\frac{3}{4}$ inches.....	. 70	=16. 66
2 inches.....	. 85	=20. 23
$2\frac{1}{2}$ inches.....	1. 25	=29. 75
$2\frac{3}{4}$ inches.....	1. 45	=34. 41
3 inches.....	1. 75	=41. 65
$3\frac{1}{2}$ inches.....	2. 50	=59. 50

A certain amount of brass smelting is done in the country, black-lead crucibles being used for the purpose. One importer of these who used to get the Battersea make told me that he read in the Philadelphia Manufacturer of an American black-lead crucible. He sent for a catalogue and found that the prices compare as follows:

American— $3\frac{1}{2}$ cents per number (number equals about 3 pounds of metal capacity), less 35 per cent.

English—3d. (6.08 cents) per number (number equals about 1 kilogram, or 2.2046 pounds, of metal capacity), less 20 per cent.

He has since imported the American article, finding it quite satisfactory.

LEAD (PIG, SHEET, AND PIPE).

Pig lead (132.4-pound ingots) is all imported from France (Marseilles). The quality is stated to be better and more pliable, and the price cheaper, than English pig. Sheet lead for cisterns, etc., comes mostly from England. Lead pipes are made in the country, being protected by an import duty of 200 reis per kilogram (3.4 cents per 2.2046 pounds), against an import duty of 30 reis (0.5 cent) per kilogram on pig. Current sizes are sold at about 800 reis (14 cents) per kilogram; small sizes at about 850 reis. Composition lead pipes come from England.

PAPER (OTHER THAN HANGINGS).

Paper for newspapers comes from France and Norway. United States paper has been tried, but, like English, found too expensive.

Wrapping paper comes from the Continent, excepting some special quality from the United States; a cheap quality is made in the country.

A leading German importer told me he found great difficulty in getting anything from England; that when English travelers called upon him, they were not able to state prices in marks or francs quickly, but had to stop to calculate the equivalents of their English prices from tables; that their invoices are not only all in English, and with English weights and money, most difficult for his Brazilian clerks, but they displayed want of attention to custom-house requirements.

PROVISIONS.

England does comparatively little trade in these, which, excluding dried meat from the River Plata, appear to come mostly from the United States and southern Europe.

STATIONERY OTHER THAN PAPER.

Ink, both printing and writing, is made at a national factory; but the amount produced must only be a small proportion of the total consumption. As regards the printer's ink, I have heard that the improved exchange has already induced one large user of the local make to import, and that he is getting his ink from the United States at 8 cents per pound in 100-pound barrels. I hear the local factory has just been put into liquidation.

WOOLEN AND WORSTED AND MIXED TISSUES.

These do not appear to be of common use here in Rio de Janeiro, except among the well-to-do classes, and 11 to 12 ounce goods are about the heaviest. Baizes are made a little in the south, but are mostly imported from England. There is much less use for them than of old, owing to the development of railways, one of their chief uses being for packing loads of goods on mule back.

FREIGHTS.

I have carefully looked into the matter of freights, and find that in a large number of cases there is a very distinct advantage to continental shippers. Sailer freights are said to be easier to arrange from the Continent than from England, and rates on weight are so much cheaper that pig iron has sometimes gone by steamer from the east coast of England to Hamburg for shipment thence by sail. I note the following comparison as to number of sailing vessels arriving from London, Liverpool, and Glasgow with those from Antwerp and Hamburg, viz:

Arriving from—	1895.	1896.	1897.
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
London, Liverpool, and Glasgow.....	19	14	13
Antwerp and Hamburg.....	38	25	24

TRADE-MARKS.

False marking of foreign (in the sense of other than English) made goods seems to be most heard of in connection with the piracy of trade-marks by national manufacturers. The law on this subject appears in itself good; trade-marks (not names) may be registered; the application for registration must be accompanied by a certificate either to the effect that the mark has not been registered elsewhere or giving the particulars of any such registration; any false indication or anything by which a buyer is deceived, such as a good, but not necessarily exact, imitation of a mark, is forbidden; and, further, by the latest national factory-marks law, national goods are not allowed to bear indications of contents, origin, etc., in any other language than Portuguese. But, although the law may be good and the tribunals fair, the process of enforcing it is intricate and expensive, owing, I gather, to the number of people who have to be feed in order to prevent vexatious delays. In the case of false indications of origin merely, it is obviously not worth any person's while to prosecute, and the State takes no initiative in the matter. It is a moot point whether articles whose names are in a foreign (*i. e.*, other than Portuguese) language, and whose names are such that they would, if translated, either lose their meaning or be ridiculous, can not be made in the country under their own foreign name; but, putting this aside, I have seen perfumery articles of national manufacture bearing labels which certainly appeared illegal, the seller nevertheless being quite unconcerned and only remarking that the law was a bad one for national industries. Makers of "Huntly & Palme's" biscuits have recently had to compromise a suit brought against them; and, I am told, two different imitators of "Apollinaris" water have paid fines, but go on again cheerfully with their fraud, while old Apollinaris-water bottles are in strong demand.

NATIONAL INDUSTRIES IN THE RIO DE JANEIRO AND SÃO PAULO DISTRICTS.

Cotton manufactures.—The largest and most developed of the national industries in the above-named districts is the manufacturing of the raw cotton of the country. Most of this cotton seems to come from Pernambuco. The majority of the mills buy in the market of Rio de Janeiro, but one of them at least imports from Pernambuco. From the figures I have been able to obtain, I make out the cost of moving the cotton from the field to the mill (in Rio de Janeiro itself), including the export duty (payable alike on cotton shipped to another State of Brazil, as on that shipped abroad), is about 1d. (2.028 cents) per pound, or 0.7d. (1.42 cents) exclusive of the export duty. The high freight coastwise resulting from the law limiting cargo to the national flag tends to make this cost higher than it otherwise would be.

Wages at one of the largest and best-managed mills are estimated to work out at 1 milreis (17.23 cents) per kilogram (2.2046 pounds) all round, or, roughly speaking, about 500 reis (8.6 cents) per kilogram on coarse cloth and 1,500 milreis (25.65 cents) on fine.

The machinery employed is almost all English. The spinning is all ring spinning, and the highest counts of yarns spun are fifties to sixties.

I visited several mills, and some reference to these may serve to indicate the importance of the industry. The "A" mill, near Rio de Janeiro, is one of the largest. It employs about 1,500 hands, has 355 carding machines, about 50,000 spindles, 1,250 looms (the majority being 36, 38, and 40 inches, with a few smaller sizes down to 30 inches, and some 48 inches), steam engines of a combined power amounting to nearly 2,000 horsepower, and an electric motor (United States) of 125 horsepower. Its chief product is bleached goods, but it also dyes and weaves trouserings, oxfords, etc., the total outturn being about 1,000,000 meters (1,093,627 yards) per month.

The "F" mill, also near Rio de Janeiro, has 12,000 spindles (all 38 inches), 318 looms, and a steam engine of 500 horsepower. It employs about 370 hands. Its chief product so far has been in bleached goods, but one-color oxfords were just being started when I visited it. Its total outturn is about 350,000 meters per month.

The supply of cotton being limited to the produce of the country, owing to the effect of the duties on imports, and the Brazilian cotton being all long stapled, both the above mills buy the poorest qualities for making low-grade goods.

The "I" mill, in São Paulo, has about 170 looms, two engines of about 240 horsepower combined, and a German motor for the electric light. It is said to employ about 400 hands. Its chief product appears to be colored goods, viz, trouserings, oxfords, etc.

The "A" mill, in São Paulo, which I also visited, is situated on the railway. It has about 22 carding machines, 4,500 spindles, 198 looms, and a 200-horsepower engine, all English, and German electric-light installation. About 350 hands are employed.

I estimate that there are at least 11,000 looms, more or less, in the Rio and São Paulo districts, besides hosiery and undershirt machinery. A good deal of dyeing is done, but only one mill does printing.

There are, however, print works at a place in the São Paulo district, and I saw the manager of these in São Paulo. They have over 800 rollers at these works, and water power to an amount (some 1,500 to 2,000 horsepower) far beyond their requirements. From 130 to 150 hands are employed, and these are chiefly immigrants expert at the work, which is of a kind that the natives can not yet be trusted to do. They have machinery for printing in as many as eight colors, and their machines are all English.

Jute weaving.—There are four jute-weaving factories, having about 1,100 looms between them. Three are in the Rio de Janeiro district, and one of the three makes a seamless bag under an American patent; but by far the most important of the four is the large factory here in São Paulo. This factory, which I have visited, contains 599 looms, which represent an annual capacity of 14,000,000 meters (15,316,000 yards), and the looms are being added to in order to bring up the capacity to 18,000,000 meters (19,692,000 yards). The staple product is the 37-inch hessian for the ordinary coffee bag, made in several different qualities; but the chief sale is of a quality weighing 290 grams (0.639 pounds) per meter (1.094 yards). Rather less than 1½ meters go to a bag. The factory will sell either bags or hessians. Thirty-inch hessians, 400 grams (0.88 pounds) per meter, are also woven for the heavy bags for upcountry use, as well as covers (varnished) for protecting coffee from rain showers in the process of drying, and jute cloth for common scissor beds.

The factory has two English steam engines of 300 and 100 horsepower, respectively; its own water supply, brought from a stream 4 miles distant; a large condensing tank, and a railway siding; and it employs about 900 operatives. From December to May there is but little sale for the hessians, so they have to go largely into stock during that period, and new depositories are being built to facilitate this.

Cordage and twine manufacture.—The making of common cordage and twine, largely from "sunn" hemp, is an industry which is carried on in a number of small rope works; but seaming twine, for the coffee bags, made of Italian tow (*Estopa pitinata*), or hemp, is made in at least two well-appointed factories, one in Rio Janeiro and one in São Paulo, both of which I have visited.

The former was only reopened this year, after having been closed for a number of years, and it appears to be under capable and active management. The machinery used is mostly English, the engine being of 80 horsepower, and there are about 1,500 spindles. About 140 operatives are employed at present. The outturn amounts to 1,500 kilograms (3,307 pounds) daily. More than half of this is seaming twine, and some 250 kilograms is good-quality parcel string, making a total of over 1,000 kilograms daily from yarn spun in the factory. The balance of the 1,500 kilograms is made from finer yarn imported from Italy, the factory not having the necessary machinery for spinning this finer yarn. Cordage and rope, from Italian hemp, are also made here.

The factory at São Paulo is situated close to the railway, and is quite new. Its machinery, including a 100-horsepower engine and a small engine for use in case of need, is all British. At present, there are only 200 twisting and 200 spinning looms. The outturn is about 500 kilograms (1,102½ pounds) daily. About 40 hands are employed.

Woolen manufactures.—A list of woolen mills was given in the report of the British consul at Rio de Janeiro for 1896, page 10. Since that list was made out, the mill first named in it has been put into liquidation, and is said to be likely to become the property of the one last named. A new mill has, however, come into existence through the enterprise of the wealthy owner of the large hessian factory in São Paulo, alongside of which factory it is being constructed and whose water supply it uses. I visited this mill. The machinery, including the engine of 300 horsepower, is all English, and English electric-light plant is being procured. So far there are only 80 looms, and only a portion of these are working, but more are en route. Worsted yarns, as well as some woolen yarns, are imported; also a little mixed wool and cotton—all from England. The chief product is high-quality stuff for both men's and women's wear, some dyed in the piece at the mill and some made from yarn imported dyed. A little flannel is also made. Common blankets with cotton one-way were tried, but did not prove a success.

Hat making.—I visited one of the leading felt-hat factories in the neighborhood of Rio de Janeiro. This factory is quite new, having been built to replace one which was burned down. It seemed very well managed and has room for expansion. The machinery, including a 50-horsepower engine and boiler and British electric-light installation, is largely British; but there are also some American and other machines. At present, about 100 operatives are employed, and the outturn amounts to about 400 hats per day, about half being made of hair and half of wool, perhaps 10 per cent of the total being hard hats.

Iron working, machinery making, etc.—The most important of these establishments in the neighborhood of Rio de Janeiro is probably the national rolling mill. The works, which I visited, have a harbor front and a railway siding. I noticed four or five old iron hulks being broken up, and the manager said he had not had recourse to puddled bars (on which the duty is 10 reis per kilogram) for six months. The output of bars amounts to about 250 tons per month. These works have a

combined power of 250 horsepower, supplied entirely by English steam engines. The electric installation is American. A large foundry is attached, where a variety of work is done, such as the making of hand pumps (American pattern), trolley wheels, tram-car wheel boxes, etc.

Another foundry which I visited makes chiefly box smoothing irons for use with charcoal, turning out about 500 finished per day. This foundry also makes cast-iron pots, cast-iron fire holders for cooking, cast-iron spirit burners (also for cooking), cast-iron tops for brick cooking ranges, and tailors' smoothing irons weighing 4 to 5 kilograms each. The spirit burners, which are much less used than the old-fashioned fire holders, are sold at only 10 milreis per dozen in large quantities. There is a carpenters' shop attached to this foundry, where wheelbarrows on the American pattern are made from native wood (steamed and bent on the premises); also collapsible stools of deal laths to sell at 30 milreis (\$5.17) per dozen, etc. The machinery in this factory is all English, including one cupola and two small steam engines. There are 86 operatives, all of whom are on piece work.

I also visited the Rio de Janeiro wire-nail factory. This factory has 40 machines (German), a French engine of 100 horsepower, and Babcock & Wilcox boilers (two). It was employing about 60 operatives when I visited it, and its product was about 5,000 to 6,000 kilograms (11,023 to 13,228 pounds) daily. The capacity of the factory is stated at 10,000 kilograms daily. The wire is all imported from Germany.

Another local industry is the making of horseshoes. The principal factory, which I visited, employs 36 hands and turns out 500 to 600 dozen shoes per day. This industry is protected by the import duty on plain articles, not otherwise specified, made from wrought iron, which is 200 reis (3.45 cents) per kilogram.

Perhaps the most important industry under this heading is the making of machinery, especially coffee machinery, in the São Paulo district. There are at least four factories engaged in this business, three of which also import machinery. One of the principal of these factories has a large foundry, and about 550 hands are employed. Coffee machinery is the principal product of these works, and water motors are said to be the next most important item of manufacture. The gross output is over 500 tons per month. It is calculated that more wrought than cast iron is used.

Matches.—The making of safety matches, practically the only ones used in the country, is an important industry. The largest factory, which is allied with the great company in England and America, is said to be under admirable management and to contain wonderful American labor-saving machinery. The outturn of this factory some time since was 630 tins per day, whilst only 50 operatives—some of them, it is true, being highly paid Americans—were employed, exclusive of the men in the repair shop. The factory which produces the best matches, however, imports everything—boxes, sticks, etc.—ready, so that there is little more to do than to put the igniting composition on the sticks and then pack the matches in the boxes. This factory, which contains German machinery, was only producing 130 tins per day at the time when the big factory was turning out 630; but its price was recently 55 milreis (\$9.48) per tin (containing 120 packets of 10 small boxes each), against 52 milreis (\$8.96) per tin for the product of the big factory, and 46 and 45 milreis (\$7.93 and \$7.75), respectively, for the product of the two other factories. From these prices has to be deducted the consumption tax of 24 milreis (\$4.14) per tin, a stamp of the value of 20 reis (0.345 cent) having to be affixed to each box.

Candles and soap.—The making of stearin candles and soap is carried on in a large, long-established, and well-managed factory in Rio de Janeiro. The price of the candles is about 17 to 18 milreis (\$2.93 to \$3.16) a box. The price of soap is from 1.800 milreis (31.6 cents) per box of 3 kilograms (6.6 pounds) to 5.600 or 5.800 milreis (86 cents to \$1) per box of 8½ kilograms (18.76 pounds).

WAREHOUSE CHARGES.

Table for calculating warehouse charges by dividing the duties leviable, according to law No. 428 of December, 1896.

Rate of duty leviable.	Rate of warehouse charges according to the period for which the goods are stored.			
	Up to 30 days, 1 per cent ad valorem per month.	Up to 60 days, 1½ per cent ad valorem per month.	Up to 90 days, 2 per cent ad valorem per month.	More than 90 days, 3 per cent ad valorem per month.
	Divisors.			
5 per cent.....	5	3.33	2.5	1.66
7 per cent.....	7	4.66	3.5	2.33
10 per cent.....	10	6.66	5	3.33
13 per cent.....	13	8.66	6.5	4.33
15 per cent.....	15	10	7.5	5
20 per cent.....	20	13.33	10	6.66
25 per cent.....	25	16.66	12.5	8.33
30 per cent.....	30	20	15	10
40 per cent.....	40	26.66	20	13.33
45 per cent.....	45	30	22.5	15
48 per cent.....	48	32	24	16
50 per cent.....	50	33.33	25	16.66
60 per cent.....	60	40	30	20
62 per cent.....	62	41.33	31	20.66
67 per cent.....	67	44.66	33.5	22.33
78 per cent.....	78	52	39	26
84 per cent.....	84	56	42	28

NOTE.—The import duties are to be divided by the corresponding divisor, according to the period during which the goods are stored in the warehouses, and the result will be the warehouse charge per month.

DAIRY PRODUCTS OF CANADA.

The great sources of wealth in Canada may be said to be four, viz, fisheries, mines, forests, and farms. The amount annually derived from them is, in round figures, \$20,000,000 from the fisheries, \$30,000,000 from the mines, \$80,000,000 from the forests, while agriculture soars above all the others combined with a grand total of over \$600,000,000. The products of the erstwhile despised "few arpents of snow" are now well known in the markets of the world. Manitoba wheats are found everywhere, the produce of what but a few years ago was regarded as so much waste land.

While wheat has made enormous progress, it is equaled, if not outdistanced, by the rapid increase of the cheese business, the phenomenal increase of which will be clearly seen by reference to annexed tables. A comparison of the cheese exports for the last ten years, as given in the official returns of the United States and Canada herewith following, shows the decrease in United States exports as compared with the evolution among our cousins in Canada.

It is well to look for the cause of this. One fact has often been lost sight of by manufacturers, and that is, the absolute necessity of pleasing customers by manufacturing what they like instead of adopting the too often vain, and always lengthy, process of endeavoring to educate them to appreciate the producer's notions of what ought to be. Business houses are not primarily pulpits for the elevation of the benighted foreigner, who prefers his cheese a little browner or his butter of a flavor rich and rare. Too often, large fields for business extension are untouched, simply because a manufacturer sent out what he thought ought to succeed, and because it did not the attempt was given up without further inquiry. To my knowledge, a first-class cheese sent to a German trader failed for no other reason than that, when cut, it would not make a good cheese sandwich. If the shape had been right, the cheese would have been a success. As it is, the sender to-day declares, "There is no market there." In another case, a consignment of butter was avoided like the plague by the peasants, because it was in barrels like those in which Finnish butter had formerly been sent, at a time when that brand had an exceedingly unsavory reputation. Dozens of other examples are familiar to everyone who has traveled with his eyes open.

There is no doubt that the decrease of imports of United States cheese into Great Britain is due to exactly the same sort of thing, together with an unfortunate remissness on the part of some manufacturers to remember it was cheese that was being made.

A few shipments of apples rotten at the bottom of the barrel, hidden by a layer of rosy cheeks, will damage the national credit to a marvelous extent; so with everything else. It may not appear of importance to a man in his factory or orchard in the middle of a vast continent, but if that same man could transport himself a few thousand miles and see his package offered for sale to a crowd of costers from East End, London, "waken as a wasp" and sharp as an "awk," he would learn a lesson, as he watched the effects on the prices of everything else that came from that district—nay, even nation.

In Canada, wise action has been taken in the enactment and rigid enforcement of laws in regard to dairy products, and, consequently, Canadian cheese has obtained a high reputation with an ever-increasing sale. The old "bee," by means of which neighbors helped one another in the young settlement, has developed into the present cooperative system, which has had such good results. By this means, the farmer on the prairie has all the benefit accruing from the use of the best machinery, which otherwise he never could have had, and consequently is able to compete on fair terms with the

rest of the world. The part played by machinery in agricultural work has been shown by the well-known statistician W. G. Mulhall, who, writing of "Industrial advance in Germany," in the *North American Review* of January, 1898, estimates the rural products of Germany in 1895 at \$2,000,000,000, and adds:

The sum total is \$50,000,000 less than the value of farm products of the twenty-three Western States of the American Union; but the number of hands in Germany is two and a half times as great, while the improved area of the United States is three times that of Germany. In Germany, the productive area is equal to no more than 8 acres per farming hand; in the Western States, it is 62 acres. The value of product per acre is, of course, higher in Germany, namely, \$31, as compared with \$10 in the Western States; but the product per farming hand is \$620 in the latter, against \$250 in Germany.

He attributes this great difference to the use of improved machinery on the large farms in the United States, and in a secondary degree to the military system in Germany, which takes from agriculture the flower of the peasantry.

In improved machinery, of course, is included such benefits as arise from cold storage in transit in trains and ships.

In Canada, the cheese and butter production could never have attained its present position, but for the great interest taken in it by the Government, which has afforded every aid possible to the farmers. The present minister of agriculture—Hon. Sydney Fisher—being a practical farmer, has given immense impetus to the trade in farm products—particularly cheese and butter; and, moreover, his knowledge has enabled him to give help that could never have been given by anyone without practical experience. The scattered and heterogeneous population of the northwestern portion of the Dominion of Canada had more than ordinary difficulties to overcome. They were isolated and in many cases remote from the railroad. The Finns, Magyars, and Gallicians, as well as the French Canadians, had to be taught every step in the method of making cheese and butter for exportation, and that task can only be appreciated by those acquainted with their conservative habits.

The rapid progress made is best told by statistics, which show that 65 per cent of the cheese in the British market is supplied by Canada. In the year 1871, there were but 353 factories in the country, turning out but \$1,600,000 worth of cheese; while in 1897, the number had increased to 2,759 factories, producing over \$16,000,000 worth of cheese.

ONTARIO.

The returns furnished to me December 22, 1898, by the minister of agriculture, show the great strides made in this Province. I have a list of 1,123 cheese factories and 234 butter factories. Ten years

ago, not a tenth of them were in existence. Many of the cheese factories are putting in creamery plants. The local legislature is very vigorous in all matters connected with agriculture, having spent \$4,509,090 in the last thirty years on the agricultural college, dairy schools, farmers' institutes, fruit-experiment stations, and the collection of agricultural statistics. This Province stands head and shoulders over all the rest in the completeness of its reports.

The chief regulations with regard to the Dominion dairy stations are as follows:

- (1) The company owning the building makes it frost proof.
- (2) The dairy commissioner pays \$100 as rent and fixes such apparatus as may be needed.
- (3) The equipment becomes the property of the company or is removed, as arranged.
- (4) The agreement lasts for two years.
- (5) The dairy commissioner manufactures butter from milk furnished at the factory at the rate of 3 cents per pound; that includes all charges for labor, tubs, fuel, sale, etc. (this low rate is set to induce farmers to join).
- (6) The dairy commissioner sells the butter to the best of his ability and pays net price to the patrons, according to milk supplied, tested by Babcock milk tester.
- (7) The dairy commissioner pays an advance of 15 cents per pound at the end of each month.
- (8) The patrons receive at the factory 80 pounds of skim milk and 10 pounds of buttermilk per 100 pounds of milk received. If the buttermilk is sold, it is to be accounted for to the patrons.

This combination of effort, by provincial and Dominion governments, is placing within the reach of the people the very best practical education obtainable upon the subjects of cheese and butter making, with the results seen in tables of reports appended hereto.

QUEBEC.

A great deal of money has been spent by the local legislature, according to the public accounts, on lectures, schools, etc., with varying success. Now, however, the Dominion Government gives a grant of \$3,000 per annum for lectures, and much good work has been done by the two governments in cooperation.

In this Province, there are syndicates of cheese factories and creameries. A syndicate is a group of from fifteen to thirty factories, the representatives of which agree to contribute a stated amount for the payment of an inspector. These have been assisted by the provincial government to the extent of half the expenses, up to \$250 for each syndicate, as the government's share. A special course of

instruction was provided for the inspectors of these syndicates, and a condition for their qualification as inspectors was that they should possess a certificate from the dairy school at St. Hyacinthe. On December 8, the assistant provincial minister of agriculture stated that the government had determined to give a bonus to induce improvement in the curing rooms.

NEW BRUNSWICK.

In 1892, the local government undertook a programme of work for the extension of agricultural knowledge, which has been productive of good results. The building of cheese factories and creameries has progressed, and their work has been successful.

The traveling dairy was introduced in 1893, giving instruction in sparsely settled districts on butter making, etc., with excellent results.

Progress of winter dairying in Ontario, Quebec, and Maritime Provinces in stations managed by the department of agriculture.

Year.	Dairy stations.	Patrons.	Butter made.	Cheese made.	Value of product.
	Number.	Number.	Pounds.	Pounds.	
1891-92	2	92	22,697	.....	\$4,349.92
1892-93	4	236	58,518	.....	13,454.73
1893-94	5	218	55,936	.....	13,480.78
1894-95	7	433	86,990	1,833	18,101.94
1895-96	5	991	108,016	.....	21,053.98
1896-97	11	646	97,704	.....	18,588.65
1897-98	1	.....	.....	.....	.....

There are now at least 150 cheese factories fitted with plant for the manufacture of butter in the winter.

NOVA SCOTIA.

The secretary of agriculture reports: "We have cooperative creameries subsidized by the government to the extent of three in each county. So far, only about one-half the counties have availed themselves of this opportunity." The approximate return of butter and cheese by the creameries last year was \$100,000.

The Manchester Steamship Line will run steamers with cold storage to Montreal in connection with the Manchester Canal. During the winter, the service is to be fortnightly to Halifax and St. John. This new venture is likely to be a great boon to the fruit and dairy men.

PRINCE EDWARD ISLAND.

Cooperative dairying has been a great success here. Up to 1891, it was unknown. It was then arranged that the farmers erect a

suitable building for a cheese factory and the department fit it up with machinery and manage it. In 1896, the department withdrew from the larger factories, and in 1897, from all. At present, all are flourishing and increasing. It is interesting to note that in 1890, there were not 10 acres of indian corn for fodder in the island. Thanks to departmental aid, in 1896, there were over 10,000 acres.

Progress of summer and winter dairying in Prince Edward Island.

Year.	Stations.	Patrons.	Butter made.	Cheese made.	Value of product.
<i>Summer season.</i>	<i>Number.</i>	<i>Number.</i>	<i>Pounds.</i>	<i>Pounds.</i>	
1892	1	143	.....	63,018	\$6,381.98
1893	11	1,187	.....	457,224	48,168.79
1894	18	1,505	44,512	802,418	86,242.78
1895	30	2,957	68,664	1,737,269	159,650.47
1896	13	739	.....	336,289	30,885.81
<i>Winter season.</i>					
1894-95	3	206	28,991	.....	5,989.26
1895-96	5	650	108,016	.....	21,053.98
1896-97	*11	646	97,704	.....	18,588.65

* Nine were separating stations only.

Two traveling inspectors employed by the department visited these cheese factories and creameries, and report that "the business may now be considered as thoroughly well established and self-sustaining."

NORTHWEST TERRITORIES.

In order to assist the farmers, the government appropriated \$15,000 in 1896. The system is briefly outlined as follows: Carts go around and collect the milk, which is brought either to separating stations or the creamery. The government officials then take charge of it, manufacture the butter, and ship it to the best markets. By means of cold storage on the trains and steamers, a market is reached which could never be by the individual settler. The charge is fixed at 4 cents per pound and 1 cent extra to go into a sinking fund, so that in due course the creamery may become the property of the district. In many cases, creameries already in existence and failures have been taken hold of by the department and operated successfully.

During the 1897 season, the department advanced 10 cents per pound on the butter markets at the end of each month. These payments are made by Dominion checks, which are payable at par everywhere. These checks are often used as currency in the north-west.

The business reported in the last season at these experimental stations is as follows:

Name of station.	Patrons.	Butter manufactured.	Average price realized at the creamery.	Net value of butter to patrons, per pound.	Manufacturing charge, per pound.	Days in operation.	Gross value of product.
	Number.	Pounds.	Cents.	Cents.	Cents.	Number.	
Calgary	31	14,071	19.04	15.04	4	143	\$2,729.80
Edmonton	90	27,364	17.62	12.68	4	148	4,840.26
Grenfell	80	39,706	17.64	11.5	4	120	7,047.20
Indian Head	61	22,715	17.33	13.43	4	156	3,959.21
Innisfail	81	38,621	18.87	13.91	4	150	7,304.36
Maple Creek	21	9,921	20.28	12.72	4	100	2,033.99
Moose Jaw	57	49,265	17.86	14.04	4	168	8,837.74
Moosomin	113	31,583	17.48	12.68	4	135	5,586.09
Prince Albert	43	20,104	16.95	12.95	4	144	3,409.34
Qu'Appelle	97	25,960	18.52	13.52	4	127	4,808.85
Red Deer	66	30,148	18.59	14.7	4	150	5,639.83
Regina	74	30,502	17.56	13.65	4	150	5,383.63
Wetaskiwin	47	17,691	18.49	13.68	4	122	3,306.43
Whitewood	131	46,871	17.77	10.5	4	120	8,340.03
Wolseley	47	20,029	17.93	13.09	4	122	3,624.91
Yorkton	109	49,352	16.74	9.94	4	144	8,362.48

Returns from Dominion dairy stations in Northwest Territories.

Year (summer season).	Dairy stations.	Patrons.	Butter made.	Value of product.
	Number.	Number.	Pounds.	
1894	1	56	23,727	\$3,653.54
1895	1	60	53,249	10,923.37
1896	3	211	132,021	24,526.43
1897	16	1,148	473,903	85,264.15

MANITOBA.

In 1894, two experts visited the new creameries and cheese factories, and, as they were furnished with traveling dairy outfits, they were able to give valuable instruction. The remarks made on the Northwest Territories practically apply to this Province.

BRITISH COLUMBIA.

In 1894, work of instruction by means of a traveling dairy was done on the mainland and on Vancouver Island. In 1895, an expert instructor assisted in establishing creameries and spent several weeks in giving instructions to those who wished to learn butter making. In 1896, further work with the traveling dairy was done.

A NEW VENTURE—TINNED BUTTER.

Professor Robertson, commissioner of dairying, has had some packages of butter sent to Japan in tins, and, as the reports regard-

ing them have been favorable, it is proposed to pack 1, 2, and 5 pound tins in a similar manner for the Klondike. The butter is wrapped up in waxed paper and then placed in hermetically sealed tins, which, it is claimed, will keep the butter good in any climate. A number of tins have been manufactured in Montreal, and a shipment has been sent from Calgary to the Yukon. Tinned butter has been a great success in France, and there seems to be no good reason why it should not be so here. Professor Robertson thinks a large trade may be developed with China and Japan, but, as neither Chinese nor Japanese include butter or cheese in their bill of fare, it would appear that they need education in that direction first.

A large trade in tinned butter has existed for years in Ireland.

PRICES IN 1898.

The highest price realized for cheese during the past year was 9 $\frac{3}{8}$ cents, at Brockville, September 28, and the lowest 6 $\frac{1}{2}$ cents, which was taken for cheese from some of the French countries early in June. London took the largest part, and Liverpool followed.

Butter prices fluctuated widely, but ruled for the season practically the same as during last year, *i. e.*, \$12.50 for a 70-pound tub. Most of it went to Bristol, London being second.

Exports of Canadian cheese and butter.

[From unpublished Government returns.]

Year.	Cheese.				Butter.			
	Quantity.	Value.	Great Britain.	United States.	Quantity.	Value.	Great Britain.	United States.
	<i>Pounds.</i>				<i>Pounds.</i>			
1877 ...	35,930,524	\$3,748,575	\$3,447,310	\$295,294	14,691,789	\$3,073,409	\$2,746,630	\$65,773
1878 ...	38,054,294	3,997,521	3,801,643	186,530	13,006,626	2,382,237	2,048,838	140,932
1879 ...	46,414,035	3,790,300	3,589,317	188,317	14,307,977	2,101,897	1,801,611	37,577
1880 ...	40,368,678	3,893,366	3,772,769	114,507	18,535,362	3,058,969	2,756,064	111,198
1881 ...	49,255,523	5,510,443	5,471,362	28,500	17,649,491	3,573,934	3,333,419	58,522
1882 ...	50,807,049	5,500,868	5,571,076	18,436	15,161,839	2,936,150	2,195,127	529,169
1883 ...	58,041,387	6,451,870	6,409,859	24,468	8,106,447	1,705,817	1,330,585	206,154
1884 ...	69,755,423	7,251,089	7,207,425	24,866	8,075,537	1,612,481	1,395,652	46,618
1885 ...	79,655,367	8,265,240	8,198,953	86,978	7,330,788	1,430,905	1,212,768	16,695
1886 ...	78,112,927	6,754,626	6,729,134	15,478	4,668,741	832,355	652,863	17,545
1887 ...	73,604,448	7,108,078	7,065,983	30,667	5,485,599	979,126	757,266	17,207
1888 ...	84,173,267	8,928,242	8,834,997	83,153	4,415,381	798,673	614,214	13,468
1889 ...	88,534,887	8,915,684	8,871,205	31,473	1,780,765	331,958	174,027	7,879
1890 ...	94,260,187	9,372,212	9,349,731	6,425	1,951,585	340,131	184,105	5,059
1891 ...	106,202,140	9,508,800	9,481,373	13,485	3,768,101	602,175	440,060	10,054
1892 ...	118,270,052	11,652,412	11,593,690	39,558	5,736,696	1,056,058	877,455	6,038
1893 ...	133,946,365	13,407,470	13,360,237	23,578	7,036,013	1,296,814	1,118,614	7,539
1894 ...	154,977,480	15,488,191	15,439,198	9,552	5,534,621	1,095,588	936,422	6,048
1895 ...	146,004,650	14,253,002	14,220,505	5,058	3,650,258	697,476	536,797	5,365
1896 ...	164,689,123	13,956,571	13,924,672	10,359	5,889,241	1,052,089	893,053	2,729
1897 ...	164,220,699	14,676,239	14,645,859	4,486	11,453,351	2,089,173	1,912,389	6,233
1898 ...	196,703,323	17,572,763	.....	.....	11,252,787	2,046,686	.....	.....

Destination of butter exported during the fiscal year ended June 30, 1897.

Countries and provinces.	The produce of Canada.		Not the produce of Canada.		Total exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>	
Great Britain.....	10,413,131	\$1,912,389	1,093,696	\$163,121	11,506,827	\$2,075,510
British West Indies.....	69,233	12,794			69,233	12,794
British Guiana.....	540	110			540	110
Hongkōng.....	336	115			336	115
Newfoundland.....	682,046	115,754	4,272	474	686,318	116,228
Argentine Republic.....			168	42	168	42
Belgium.....	300	60			300	60
China.....	2,456	837			2,456	837
Japan.....	30	10			30	10
Germany.....	41,752	8,513			41,752	8,513
Haiti.....	1,465	171			1,465	171
St. Pierre.....	147,803	23,409			147,803	23,409
United States.....	37,676	6,233	3,900	663	41,576	6,896
Danish West Indies.....	53,675	8,293	190	8	53,865	8,301
Spanish West Indies.....	2,908	485			2,908	485
Total.....	11,453,351	2,089,173	1,102,226	164,308	12,555,577	2,253,481

Exports of butter by provinces during the fiscal year ended June 30, 1897.

Province	The produce of Canada.		Not the produce of Canada.		Total exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>	
Ontario.....	598,237	\$101,794			598,237	\$101,794
Quebec.....	10,037,112	1,851,164	1,111,076	\$164,253	11,138,288	2,015,417
Nova Scotia.....	553,811	91,300	1,050	55	554,861	91,355
New Brunswick.....	74,008	13,708			74,008	13,708
Manitoba.....	56,283	6,531			56,283	6,531
British Columbia.....	3,172	979			3,172	979
Prince Edward Island.....	130,728	23,697			130,728	23,697
Total.....	11,453,351	2,089,173	1,102,226	164,308	12,555,577	2,253,481

Destination of cheese exported during the fiscal year ended June 30, 1897.

Countries and provinces.	The produce of Canada.		Not the produce of Canada.		Total exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>	
Great Britain.....	163,942,649	\$14,645,859	7,181,002	\$586,433	171,121,651	\$15,232,292
Australia.....	720	159			730	159
British West Indies.....	73,627	8,457			73,627	8,457
British Guiana.....	1,331	147			1,331	147
Hongkong.....	821	203			821	203
Newfoundland.....	131,531	11,954			131,531	11,954
Central America.....	130	13			130	13
China.....	9,933	1,708			9,933	1,708
Germany.....	120	24			120	24
Habana.....	367	69			367	69
Haiti.....	966	104			966	104
France.....	899	94			899	94
Japan.....	5,513	855			5,513	855
St. Pierre.....	381	31			381	31
United States.....	33,962	4,486	492	78	34,454	4,564
Danish West Indies.....	17,749	2,076			17,749	2,076
Total.....	164,220,699	14,676,239	7,181,494	586,511	171,402,193	15,262,750

Exports of cheese by provinces during the fiscal year ended June 30, 1897.

Province.	The produce of Canada.		Not the produce of Canada.		Total exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>		<i>Pounds.</i>		<i>Pounds.</i>	
Ontario.....	20,842,710	\$2,010,729			20,842,710	\$2,010,729
Quebec.....	139,780,676	12,313,406	7,181,194	\$586,476	146,961,870	12,899,882
Nova Scotia.....	683,119	78,093			683,119	78,093
New Brunswick.....	1,283,786	130,494			1,283,786	130,494
British Columbia.....	6,545	934	300	35	6,845	969
Prince Edward Island.....	1,623,848	142,571			1,623,848	142,571
Northwest Territories.....	15	12			15	12
Total.....	164,220,699	14,676,239	7,181,494	586,511	171,402,193	15,262,750

Quantity and value of butter, with the countries of origin, imported into Great Britain during the calendar year 1896.

Country.	Quantity.	Value.
	<i>Pounds.</i>	
Denmark.....	137,623,808	\$30,603,610
France.....	52,371,424	12,350,116
Sweden.....	36,268,848	8,101,467
Holland.....	26,260,528	5,629,400
Victoria (Australia).....	17,344,880	3,745,849
Russia.....	17,002,160	3,674,723
United States.....	15,853,936	3,005,288
Germany.....	12,076,400	2,609,731
Canada.....	9,895,984	1,653,421
New Zealand.....	6,313,776	1,352,436
Belgium.....	4,270,784	927,314
Norway.....	1,912,400	400,346
Argentine Republic.....	1,765,456	359,777
New South Wales.....	871,024	183,458
South Australia.....	126,896	27,019
Other British possessions.....	105,728	15,427
Other foreign countries.....	160,384	36,551
Total.....	340,224,416	74,675,933

In 1897, Canada supplied 12,253,024 pounds of butter out of a total import of 360,393,824 pounds.

Quantity and value of cheese, with the countries of origin, imported into Great Britain during the calendar year 1896.

Country.	Quantity.	Value.
	<i>Pounds.</i>	
Canada.....	138,241,264	\$12,601,265
United States.....	65,092,944	6,005,646
Holland.....	32,814,656	3,575,107
New Zealand.....	6,170,640	561,384
France.....	5,115,712	679,055
Belgium.....	3,504,144	381,493
Other British possessions.....	171,696	13,870
Italy.....	148,736	19,048
Germany.....	57,344	5,611
Other foreign countries.....	69,664	5,850
Total.....	251,386,800	23,848,329

In 1897, Canada supplied 170,986,368 pounds of cheese out of a total import of 291,555,936 pounds.

Cheese and butter imported into Great Britain for the year ended September 30, 1898.

[From official British returns.]

Country.	Butter.	Cheese.
	<i>Tons.</i>	<i>Tons.</i>
Colonies:		
Canada	110,921	1,444,828
Australasia	228,915	44,611
Total.....	339,836	1,489,439
Foreign countries:		
Sweden	209,400	(*)
Denmark.....	1,433,482	(*)
Germany.....	42,524	(*)
Holland.....	271,847	278,737
France.....	450,760	37,176
United States.....	54,274	521,719
Other countries.....	268,809	43,937
Total.....	2,821,456	881,569
Grand total.....	3,161,292	2,371,008

* Not separately given; probably included in other countries.

DAIRY LEGISLATION.

In response to a letter recently addressed by me to Prof. J. W. Robertson, commissioner of dairying for Canada, asking his views on the subject of dairy legislation, I have received the following synopsis of an address delivered by him before a farmer's convention at Ottawa:

All laws dealing with commerce should aim to prevent fraud. As far as possible, they should protect the public interest against injury, even if no fraud be intended. When a man occupies the honorable position of a legislator, it is his duty to obtain all possible information of the facts bearing on the subject under his consideration. It is also clearly his duty to take counsel with those who carry on the business or businesses likely to be affected by any legislation he may promote. No man can stand outside of any business and say, "I think so and so should be done for its benefit," with the same certainty of being right as can the man who is actually engaged in the business. In the legislation of late years, so far as the department of agriculture is concerned, an effort has been made to obtain information from the people engaged in the business, and then to crystallize what they need into a law which will benefit them and do no harm.

The dairy products act, 1893, was passed to prevent the making of "filled" cheese in Canada. I do not believe that a single box of filled cheese has been made in the country since that time. It was thought proper to include in the law a provision to prohibit the fraudulent branding of the word "Canada" on cheese not made in this country. * * * Since the law was passed, if anyone falsely marks cheese or butter with the name of "Canada" he is liable to a fine not exceeding \$20 and not less than \$5 for each box of cheese or box or package of butter.

It was further thought desirable that the name of the country from which the cheese came into Canada should be plainly marked on the package. The Government employs an inspector at Montreal to see that all butter and cheese coming from the United States in bond shall be branded "The produce of the United

States" before it is exported from Canada. I think there is no doubt that the law of 1893 was beneficial legislation, and beneficial only.

The dairy act, 1897, was passed to provide for the registration of cheese factories and creameries and make the branding of the word "Canada" or "Canadian" on all cheese and butter intended for export compulsory. There had been a widespread agitation for two years on the subject of the branding of the date of manufacture on cheese. There was much conflict of opinion as to whether the date of manufacture should be branded on the cheese or not.

The branding of the date of manufacture was not made compulsory by the dairy act of 1897. However, section 6 of the act prohibits misrepresentation as to dates of manufacture. It is as follows:

"No person shall knowingly sell, or offer, or expose, or have in his possession for sale any cheese or butter upon which, or upon any box or package containing which, is printed, stamped, or marked any month other than the month in which such butter or cheese was made; and no person shall knowingly and with intent to misrepresent sell, or offer, expose, or have in his possession for sale any cheese or butter represented in any name as having been made in any month other than the month in which it was actually made."

The penalty for violation is a fine not exceeding \$20, and not less than \$5, for every box or package sold or offered or had in possession for sale contrary to the provision of that section.

However, there was an evident desire on the part of the owners of cheese factories and creameries to have legal provision whereby they could brand on the cheese and butter produced at their factories a registration number and be assured of protection in the exclusive use of that number. It was not thought desirable to make the use of a registration number compulsory. It is quite optional, but it provides the means of identification of the produce of any factory by a registered number, the owner of such number having the exclusive right of using it practically as a trade-mark.

If any manufacturer has what he considers to be extra-fine cheese or butter and desires to preserve its identity, he can do so now. The law forbids the removal of the registration number under a penalty not exceeding \$20, and not less than \$5, for every box or package. That provision of the law has already been taken advantage of to a large extent. Up to last week, we had received applications from 394 factories and had issued registration numbers to 378. The registration is free.

The law of 1897 makes compulsory the branding of "Canadian" or "Canada" upon every box or package of butter and cheese exported. In the case of cheese, the word must be branded on the cheese itself before it is taken from the factory where it is made. The British law requires that the packages containing cheese or butter shall be branded with the name of the country or their origin. Some time ago, large cheddar-shaped cheese of 100 pounds and over were made in Canada, and doubtless afterwards retailed in England as Scotch or English cheddars. The retailers would get from 4 to 6 cents per pound more for it than the price at which they were retailing Canadian cheese, but no part of this 4 to 6 cents came to Canada. The injury to our cheese is wrought by the consumers being made to believe that the cheese that they use and pay a high price for is not Canadian, although made in Canada. I think it is important that the word "Canada" be branded, not only on the box, but on the cheese itself, and, still better, that it be stamped into the cheese itself, so that the word "Canada" would be apparent to those who saw the cheese uncut in the retailer's shop. It would be a good plan to have the word "Canada" or "Canadian" pressed into the end of the cheese while still in the cheese press. The indentation of the letters need not be more than one-eighth of an inch deep into the cheese. Any cheese maker who lets any cheese out of his

factory in 1899 for export, without the word "Canadian" or "Canada" on each one, is liable to a fine.

A few people who do not know the trade may complain that this is harassing legislation. They are, perhaps, cousins of the people of whom John Bright once spoke, when he said that there were people in the world who thought the ten commandments the most harassing legislation that was ever enacted, because they seemed to run counter to their own peculiarities so often.

I now come to speak of the bill which was introduced into the House of Commons by Mr. Parmelee last year. It was entitled "An act to prohibit improper speculation in the sale of butter and cheese." The bill deals with the commerce of butter and cheese, and as soon as you touch anything that concerns the bargain making of the people, you touch something that should be dealt with in a most careful and cautious way, but not in a cowardly way. The careful way to deal with many matters which are known as abuses is the way we used to deal with nettles. When you take them with a right good grip, they don't sting. All bargain making, which is fair commerce, consists in arranging for the exchange of things. All commerce which is honest is the exchange of things. If there is nothing to exchange, there can not be a fair transaction. I may bet on a horse race if I want to bet, but that is not commerce; there is nothing to exchange. The one who gets the money gives the one with whom he deals no equivalent.

In the exchange of things in our system of civilization, there are usually the three classes—the producers, those who are called middlemen, and the consumers. The producers of cheese, for example, are not merely the men who manufacture the cheese in the factories, but they include those who keep the cows, the milk drawers, the men who make the wagons and harness, the men who make the machinery and erect the buildings, and scores of other productive workers. These men who are known as producers are seldom able to act as their own middlemen with advantage.

In a few cases, the farmer can carry his own butter, cheese, eggs, and other things to the market and in the market find the actual consumer willing to exchange money for them. But in most cases, there must be someone to do the work of distribution. He is known as a middleman, a buyer, a merchant, or distributor. The carrying companies who transport the cheese and other products from one place to another are also middlemen. How are the producers in Canada to reach the consumers in Great Britain, unless there be some middlemen in Canada to render the service of carrying the products from here to the consumer?

I have no sympathy with the agitation which is sometimes raised for doing away with the middlemen. They are just as necessary for the production of wealth in Canada as are the producing workers. The middleman is a useful person in his place, and so long as he does his part of the nation's work, he is fairly entitled to be well paid for his services; but he is not entitled to any more than his services are worth.

Let me illustrate the difference between a middleman who renders services in commerce, and a middleman who obstructs commerce. In the olden times, a traveler from the north of England to London had to go by stage coach, and he might carry some of his goods with him. He had to pay something for coach hire and had to pay directly or indirectly for the tolls on the road. That was paying for the capital and labor of the men who made and kept the road.

At a certain stage of the journey, in the vicinity of Epping Forest, where the notorious Robin Hood drove his money-making business, there stood two men, one on each side of the road, with old-fashioned pistols. They made the travelers stand and deliver to them. They did not render any service to anybody in connection with travel or commerce. They simply took the traveler's money because

he could not help himself. There are men in Canada now of that order, who stand in the highways of commerce and make the toilers stand and deliver to them.

I say the law should abolish the trade of these men—not of the men who keep the tolls or drive the coach or render any service, but of the men who stand and say “deliver.” The law should speedily and surely abolish these men and their occupation. It is incorrectly said that such men in commerce are speculators. Not a bit of it. Speculation is a legitimate and necessary part of commerce. When a man buys cheese in June and does not intend to sell it until September, he buys it in the hope of a rise in the market; he is speculating—that is, hoping for a profit. That is legitimate speculation; wholesome business. Such a buyer gets possession of something, and every pound of butter or cheese which he owns as a speculator makes him so much the more a factor doing all he can to keep the price up. Cheese may be selling at 9 cents or at any other figure per pound at that time. A man may not buy any cheese in June at all, but he may say to himself: “I see a good chance to make some money without doing anything; a chance of getting something for nothing. I will offer to sell August cheese for delivery in September at $8\frac{1}{2}$ cents, and telegraph that offer to a score of houses in Great Britain.” He has not put a cent of money into cheese; he does not own a box of cheese; he does not render an iota of service in the development of the cheese trade. He has merely offered to sell August cheese for delivery in September at half a cent under the current price.

It may be that nobody in England accepts his offer, but the firms to whom he cables will be led to say: “We have bought June cheese at 9 cents, and here we are offered August cheese at $8\frac{1}{2}$ cents. Humph! we will not buy any more cheese just now.” When anybody sends a cablegram or any other communication offering to sell “futures” or to sell “options,” if the offer is accepted, his whole power and influence are used to weaken the market. He is merely betting that the price will be lower, and then he uses every means, fair and unfair, to make it lower. He is not a necessary middleman in commerce any more than a highwayman is in travel; and civilized nations, having abolished one, are now confronted with the duty of preventing the other.

The matter of selling options or futures is not a theoretical evil. It has been a great injury to the trade during the past, and, to a less extent, during some former seasons. At a meeting of the board of trade of Montreal, held a week ago, the president said that he deplored the practice of selling “options” or “futures” in cheese and butter, that he thought the practice was on the increase, that it was getting to be a grievous injury to the trade, and that last year it had done a great deal of damage.

The practice of selling “futures” in cheese and butter works also another injury to the trade in these products; it helps to level the price down and, in some measure, to prevent the man who has exceptionally fine goods from getting as much of an advance over the common quality as he would otherwise obtain.

Let me give you an instance. If May and June cheese are selling at 9 cents, and about the middle of June, when the price is 9 cents, one of these sellers in “options” or “futures” has reason to believe that cheese will go cheaper, he may cable to Great Britain, offering to sell to each firm 1,000 boxes of July cheese at 8 cents. He does not own a box of cheese, but in June he may cable, offering to sell 20,000 boxes of July cheese at 8 cents. If even a few of the firms to whom he cables accept his offer, what will be his policy? To bring down the price here below 8 cents, so that he can buy for less. If he can not do that, what then? Why, to buy the cheapest cheese he can find, regardless of quality, and tender those on his contracts. He would not cable to deliver “A1” fancy cheese, and thus he will be in the market to buy cheese of any quality that can be tendered on his contracts at all. That practice tends to average the price down, so that the cheese from the

poorest factories may be paid for within a quarter or half a cent per pound from that of the best factories.

Recently, I heard someone ask, "Why don't the merchants discriminate against the bad flavors?" So long as options in cheese can be sold, there will be buyers to take 1,000 boxes and more, no matter what the flavor is like. The bill introduced by Mr. Parmelee is intended to prohibit that kind of contract—the selling of "futures" or "options."

Clause 3 of the bill deals with two matters. It reads as follows:

"Everyone who by himself or through the agency of another person (a) sells, or (b) offers to sell, or (c) agrees to sell, or (d) agrees to offer to sell any butter or cheese which at the time such sale, offer, or agreement is made has not been manufactured and is not his property or the property of some person for whom he is duly authorized to act, is guilty of an offense, and liable on summary conviction to certain penalties."

You will observe (1) that nobody shall sell, offer to sell, agree to sell, or agree to offer to sell cheese or butter which is not then made. What harm can that make to anybody? If everybody is prohibited selling July cheese until July cheese is made, whose interests will be injured by that prohibition?

(2) The bill practically forbids anybody to sell cheese or butter unless it is his property, or the property of someone for whom he is duly authorized to act. Why should anyone claim a right to sell what he does not own? Even if the bill should go so far as preventing factory salesmen from selling cheese or butter before it is made, I think that would be a good thing. I think the factory man does not gain anything on the whole by selling his cheese or butter before it is made. But the bill exempts the salesman of the factory, in clause 6. It reads as follows:

"Nothing herein shall be deemed to prohibit any person who is duly authorized to act for the person or persons who supply milk to any dairy or butter or cheese factory from selling or offering to sell, or agreeing to sell, any butter or cheese to be manufactured at such dairy or cheese factory or butter factory."

A salesman may rightly be exempted, because he represents the material and means out of which and by which the butter and cheese will be made. So, if a factory salesman contracts to sell his cheese or butter before it is made, this bill will not interfere with that action.

By the dairy act of 1897, the registration of cheese factories and creameries is provided for. By this means, each factory has a special number by which the products of such factories can be identified.

The bill referred to by Professor Robertson was introduced into Parliament last session, but was not passed.

MONTREAL, *February 15, 1899.*

JOHN L. BITTINGER,
Consul-General.

BICYCLES IN FOREIGN COUNTRIES.*

The following reports on the bicycle trade have been made in answer to inquiries by a Chicago trade journal. The editor has received advance copies of the reports.

FRANCE.

RHEIMS.

Bicycles are in general use in the department of Marne, which ranks third in France in the number of bicycles used in proportion to inhabitants. The first is Paris and the second Gironde.

The roads are very good and are kept in good repair, but are rather hilly. There is only one local factory, and its product is not important.

Wheels come here from England and the United States. Importation from America has increased rapidly, whereas that from England has decreased. Three machines of American make are now sold to one of English.

The duty is 250 francs per 100 kilograms (\$48.25 per 220.46 pounds) net, either on bicycles or accessories. Bicycles enter this district from Havre and Calais. The best communication with the United States is via Havre. The freight by the Transatlantique Line, New York to Havre, is \$6 to \$8 per 40 cubic feet, in proportion to the importance of the invoice. The port charges are—

	Francs.	Cents.
Bill of lading.....	0. 60=	11. 5
Stamp.....	1. 20=	23. 1
Statistics.....	0. 10=	1. 9
Total.....	1. 90=	36. 5
Expenses at Havre:		
Carriage to station.....per package...	0. 20=	3. 8
Removing from custom-house.....do.....	1. 00=	19. 3
Total.....	1. 20=	23. 1

In case the reexpediting of the goods from Havre is confided to Mr. H. L. Breton, Boite postal 291, Havre, he would charge, instead of 20 centimes (4 cents) per package, 2 francs per 100 kilograms (38.6 cents per 220 pounds) for shipments of a minimum of 4,000 kilograms (8,818 pounds). For shipments of more than twenty packages, his charge would be 50 centimes (9.65 cents) instead of 1 franc

* For a previous series of reports on the bicycle trade in foreign countries, see CONSULAR REPORTS No. 212 (May, 1898), p. 123

(19.3 cents) per package for the expense of taking out of custom-house.

Bicycles from the United States are almost always shipped mounted and packed in wood-lattice cases. The bicycles are enveloped in very strong paper. The pedals (unmounted) are placed in a small case inside, which also contains all the accessories (lanterns, etc.). The handle bars are simply fastened to the interior of the case. Each case contains from one to four machines; never more. The cases must be very strong to stand sea voyage and rough handling.

Many machines are sent here from houses having headquarters in Paris, but some of the dealers named below import directly:

M. Leeroux, Place Drouet, d'Erlon; French machines.

M. Ollier, rue de Talleyrand; English, French, and American machines; the largest store in Rheims.

M. Malot Dieudonné, rue de Mars; English and French machines.

M. Ferlin, rue de Landouzy; cheap machines of any make.

M. Roselet, rue des Boucheries; English, French, and American.

W. A. PRICKITT,

RHEIMS, *December 5, 1898.*

Consul.

LA ROCHELLE.

The State highways could not possibly be better. The Charente Inférieure is noted for its fine roads. The general condition of even the small roads is excellent. The country is flat, and conditions are ideal for cyclists.

The only manufactory of cycles in this department is at Niort. Bicycles are transshipped here from Havre or Bordeaux. There are bonded warehouses at La Pallice, the deep-water port of La Rochelle.

Goods should be crated in such a way as to protect the wheels and yet clearly show the machines. The weight of each separate wheel should be marked on the case, as well as the weight of case or crate.

There is but one person in this neighborhood making direct importations—Mr. Grenfell Stewart, 13 rue du Palais, La Rochelle. Retail dealers are:

M. Bertrand, 28 rue Chandrier, La Rochelle.

M. Chaulieu, 20 quai Duperré, La Rochelle.

M. Cacaud, 11 rue Verdière, La Rochelle.

M. Caduff, 32 rue St. Yon, La Rochelle.

M. Piscitelli, 14 bis rue du Temple, La Rochelle.

M. Charbonnier, 31 rue Clémot, Rochefort.

M. Dupuy-Ferrembach, 34 rue Duvivier, Rochefort.

M. Duval, 34 rue Lafayette, Rochefort.

M. Malgat, 113 rue des Fonderies, Rochefort.

M. Moquais, 39 rue du Breuil, Rochefort.

M. Wunderer, 136 rue Chauzy, Rochefort.

M. Cassaugade, avenue Gambetta, Saintes.

M. Chassériand, Grand rue, Saintes.

M. Peschet, Cours National, Saintes.

M. Solcart et Cie, rue St. Entrope, Saintes.

The makes found here are the Crescent, Dayton, Waverly, Cleveland, and Crawford—all American; and the Rudge and Humber, English wheels. There are, besides, several machines of French make, as the Aceténe-Metropole (chainless), Clement, Etoile, Diamant, and Puegot.

GEORGE H. JACKSON,
Consul.

LA ROCHELLE, *December 9, 1898.*

SWEDEN.

Some time ago, the use of bicycles was confined to the wealthier classes, but with the introduction of less expensive wheels, their use has largely increased. In the cities especially, a great many workmen own bicycles.

The condition of the roads is pretty fair, but after heavy rains, and especially in the fall and the spring, the country roads get muddy. Certain parts of the country are very hilly and the roads more or less rough; therefore, bicycles ought to be strong. As a rule, mud guards and brakes are used.

Bonded warehouses, as such, do not exist. Importers may use their own warehouses. Göteborgs Magasins Aktiebolag, of this city, leases storerooms in which goods may be kept under bond until sold or otherwise disposed of. In either case, the goods are kept under the lock and seal of the custom-house until the duty has been paid. Upon due notice to the customs authorities, such goods (ned-erlagsgods) may also be exported to other countries, without payment of duty; but warehouse dues must be paid. In the presence of a custom-house official, the owner of the wares may enter the warehouse and take out small samples, give the goods proper care, etc.

There are about sixteen bicycle factories in Sweden. Some of them are small concerns, however, and I believe that many buy parts of bicycles from larger factories. The repair shops are numerous.

Bicycles are principally imported from England, the United States, and Germany. As to customs duty, there is no discrimination against the productions of any particular country. The

Riksdag at its latest session changed the duty on finished bicycles to 25 kronor (\$6.70) apiece, and on parts of bicycles to 2 kronor (53.6 cents) per kilogram, which rate will be charged after January 1, 1899.

The chief receiving port on the western coast of Sweden is Gothenburg. There are also other ports of entry, among which Malmö and Helsingborg may be mentioned.

The port charges on bicycles amounts to 1 per cent of the duty paid, to which should be added about 7 cents warehouse dues for each bicycle. The dues to be paid for bicycles placed in bonded warehouses also amount to 1 per cent of the duty.

Bicycles are generally covered with paper, bagging, or straw, and packed, one or several, in an open crate. I have heard no complaints against this kind of packing. The crates should be strong enough, however, to stand ordinary handling without breaking. It would probably be too expensive to use tight packing cases.

It is hard to tell who are the leading importers. Wholesale merchants, as well as retail dealers, are seldom willing to furnish any information about the extent or relative importance of their business transactions. Still, the following firms may be mentioned:

Paul Berghaus, Gothenburg, wholesale hardware merchant; handles principally a Canadian bicycle, but might try others.

Wilh. Denninghoff, Gothenburg, wholesale hardware merchant; said to own shares in a Swedish bicycle factory.

Nornans Symaskins Werkstads Aktiebolag, Gothenburg, manufacturers of sewing machines; wholesale and retail dealers in sewing machines and bicycles; bicycles handled, Columbia chainless, Stanley, and several other kinds.

Göteborgs Gummibolag, Gothenburg, dealers in rubber goods; handles Progress, made in Chicago, and Adler Räder, made in Germany; also a chainless bicycle made in Copenhagen.

Landens Ingeniörsbyrå, Gothenburg; chief business, electric elevators; handles the President bicycle, and another kind made in Hudiksvall, Sweden.

Olof Lindstrands Idrotts-affär, Gothenburg, Swedish sporting goods, handles the Brennabor bicycle, of German make.

Jacob Bagge, Gothenburg; sells the Crescent bicycle.

A. Th. Nyberg, Gothenburg, dealer in hardware, firearms, and ammunition; sells also the Durkopp bicycle, of German make.

Blidberg & Stridsberg, Gothenburg, clothiers; exhibit in their show windows "American high-art bicycles," made by Messrs. R. H. Wolff & Co., New York.

Göteborgs Velociped-affär, Gothenburg, general hardware dealer; handles principally the Humber bicycle, made at Malmö, Sweden.

Ivar & Otto Klein, Malmö, Sweden.

A. B. Palm, Helsingborg, Sweden.

The shipment of inferior bicycles from the United States seems to have created a demand for the English and German bicycles. To my personal knowledge, a dealer imported 350 bicycles from America; terms of payment, cash against documents. When the machines arrived, it was found upon examination that the inside tube of the tires was so poor that the least pulling or stretching would tear it. The importer called on me, but I suggested that he leave the case with the regular custom-house arbitrators, appointed for such cases. The bicycles were later sold at auction at a great loss to the importer, who was at the mercy of the exporter, the money being already paid. Cases of this kind do great harm to the reliable American manufacturer who turns out a first-class bicycle.

The English and German exporters give from three to six months time, and all shipments are allowed examination before being accepted.

Bicycles now retail here at prices ranging from 350 to 200 kronor (\$93.80 to \$53.60), and some are even sold as low as 160 kronor (\$42.88) apiece.

ROBERT S. S. BERGH,

GOTHENBURG, *November 28, 1898.*

Consul.

SWITZERLAND.

Bicycles are in general use, especially in French Switzerland, Geneva, Lausanne, Zurich, Lucerne, etc. The condition of the roads varies very much; they are not suitable for riding from December until March, owing to the heavy traffic everywhere and to the fact that they are repaved during this period. During the season (which of late has not set in before April) the best roads are found in French Switzerland, Italian Switzerland, and in the Cantons of Aarau, Lucerne, and Basel. They are rather rough in the Cantons of Zurich, Graubünden, and Schaffhausen, where the roads are often cut up by heavy traffic. Half of the roads are hilly, and the cycles have to stand a great strain. The only wheels suitable for this country are those with strong rims; thick, nonslipping tires; reliable brakes, spring saddles, and mud guards. This outfit should be made imperative for every wheel imported into this country. In French Switzerland, 1½-inch tires on 28-inch wheels are asked for most, while in German Switzerland, only 1⅝ and 1¾ inch tires find buyers.

The receiving port for French Switzerland is Havre and for German Switzerland, Antwerp.

There are bonded warehouses in Geneva, Basel, and Schaffhausen.

The majority of cycles are imported from Germany; the United States follows, and then England. The duty on bicycles entering this country is 70 francs per 100 kilograms (\$13.51 per 220 pounds). In French Switzerland, 20 per cent allowance is made for crating and packing; but in German Switzerland, the duty is charged on the gross weight. Consequently, the crating must be as light as possible, and closed boxes should never be used. It has frequently occurred that more duty had to be paid on the box, owing to its weight, than on the bicycle itself. It is necessary, however, that the metals be greased before leaving the factory, and that the whole cycle be wrapped in paper (preferably in large paper bags). There is no differential duty favoring certain countries.

All loose parts should be in small sealed boxes inside the crate; but no catalogues, bill of lading, or posters should be inclosed. These should be sent separately, or at least invoiced separately, or else the same duty will be charged as on the bicycle.

The leading importers are: L. Delapraz, Geneva; Bruel Bros., Geneva; L. Despland, Lausanne; Thomas F. Alton, Zurich; Amsler & Co., Schaffhausen; Gebr. Schmidt, Basel (Bale); E. Ioss, Marion street, Berne—all of whom, except the last two, are wholesale and retail dealers. Other retail dealers are:

Zurich.—August Frey, Wolff-American, New York.

G. Ogurkowski, Cleveland and Bennabor.

M. Stifler, Express, Hercules, and Rudge.

A. Lehmann, Adler.

Thomas F. Alton, Humber, Crawford, Columbia, Rambler, Sterling, and Victor.

The last firm takes the greatest interest in American cycles, and pushes them extensively.

Berne.—Hamberger & Lips, Columbia, Cleveland, Humber, Peugeot, and Naumann.

Burgher & Heimlicher, Crawford and Wanderer.

Maurer & Hofer, Rambler.

Basel.—G. Grisard, Gladiator and Clement.

I. Iten, Cleveland.

Lucerne.—Thomas F. Alton, branch of Zurich house.

F. Birrer, Adler and Wanderer.

St. Gall.—F. Mäder, Durkopp and Opal.

Geneva.—I. Van Leisen, general agent, Columbia.

L. Ansermier, Gladiator.

Bruel Bros., general agents, Cleveland.

Vouga Bros., Stearns.

Vassalli & Grilliet, Peugeot.

A. Domenjos, Sterling and Naumann.

E. Panchand, Georges Richard.

Lausanne.—P. Despland, general agent, Rambler.

Interlaken.—E. Götz, Rambler.

Freyburg.—F. Stoucky, Rambler.

A. LIEBERKNECHT,

ZURICH, *January 21, 1899.*

Consul.

ADEN.

The bicycle has not attained the popularity here that it has in many places. Its use is confined almost entirely to the European and American residents. The natives have not adopted this method of conveyance to any great extent, which may be accounted for, as a rule, by their poverty.

The conditions of the roads and streets are not such as would attract a wheelman. One main road, leading from Aden (camp) to Aden (Steamer Point), a distance of some 5 miles, is kept comparatively smooth and free from sand; but it is very hilly and in some places so steep that a cyclist can not ride up. Elsewhere in this section of Arabia, the roads are rough and sandy, and almost three-fourths of the year the monsoon drives such a dust as to add great discomfort to the topographical inconveniences.

There are no domestic manufacturers in this district, and not even a repair shop. The bicycles in use here are imported from the United States and England, the greater number coming from the United States.

There is no duty on bicycles, or repairs for same, in Arabia; but any that may be shipped to Somaliland would be subject to a duty of 5 per cent. This duty would be assessed on goods coming from any country, and there is no differential rate.

Aden is the receiving port for southern Arabia and Somaliland. There is a port charge of about 24 cents per each 35 cubic feet, which covers all the landing and port charges. There is no bonded warehouse here.

I am not aware of any special rules or requirements for the packing of bicycles to be entered here. I have seen some arrive packed in frames similar to those used in shipping wheels in the United States.

There are no regular bicycle dealers. The following firms have imported some wheels: Messrs. Pallonjee, Dinshaw & Co.; the Arabian Trading Company, Limited; Menohew Messa; and W. H. Lockerman. The first named is now keeping in stock a small lot of supply and repair goods. The Cleveland, Relay, and Columbia wheels have been sold here.

See CONSULAR REPORTS No. 217 (October, 1898), page 284, where a previous report from this consulate on the subject of bicycles will be found.

ADEN, *November 29, 1898.*

E. S. CUNNINGHAM,
Consul.

MADAGASCAR.

Bicycles are not in general use in this country. There are two at Tamatave, owned by Frenchmen. The native has not as yet reached this stage of civilization.

The roads about Tamatave are at all seasons of the year nearly ankle deep in sand, rendering cycling almost impossible. There is some talk of constructing a driveway along the seacoast. The country outside of Tamatave is mountainous and intersected by many rivers. The roads at the capital, Tananarivo, are better adapted to the requirements of the wheel, and there are a few more in use there, among the European population. Bicycles are imported from France. The duty on foreign wheels is 250 francs (\$47.25) per 100 kilograms (220.46 pounds), besides a municipal tax of 1 per cent of the cost. French bicycles are admitted free.

Tamatave is the principal receiving port on the east coast, as well as the chief port of the island. On the west coast are Majunga, Nossi Bé, and Fort Dauphin. Port charges are 5 francs (96 cents) per ton. A recent decree from France has established a bonded warehouse at Tamatave.

Goods should be packed and invoices prepared with great care. The slightest mistakes are fraught with serious consequences. The invoices should state the weight of all the parts of the wheel and the total weight, as well as that of the case and material used for packing.

The leading importers are Messrs. Dadabhay & Co., the Compagnie Lyonnaise de Madagascar, Mr. F. Bonnet, and Mr. P. H. Golaz—all of Tamatave. Only two have been imported by Messrs. Dadabhay & Co. in the past two years. The other firms have imported about an equal number.

I would suggest that correspondence with these firms (save Messrs. Dadabhay & Co., who are English) be in the French language.

TAMATAVE, *December 25, 1898.*

M. W. GIBBS,
Consul.

STRAITS SETTLEMENTS.

Bicycles are in general use amongst Europeans here, and even natives use them so far as their means will allow. The roads are fairly level and smooth, with few hills of little height. Most strangers declare they are ideal for the wheel. There are no manufacturers of bicycles here.

Wheels are imported mostly from the United Kingdom, the United States, and a few from Germany. There is no duty on bicycles or on any other article entering this district from any part of the world, the port being free.

Singapore and Penang are the receiving ports in this colony. Port charges are nil, as affecting importers. There are no bonded warehouses.

Goods should be carefully packed in cases lined with pitch paper. Plated parts should be well coated with vaseline, and cases should not be stowed close to boilers.

The leading importer is the Borneo Company, Limited, handling the Humber, Beeston, and Osmond wheels.

Retail dealers are:

John Little & Co., Limited; Rover, Quinton, Remington.

Katz Bros, Limited; Adler, Gloria, Manhattan.

Robinson & Co.; Premier, Dayton, Ariel.

Riley Hargreaves & Co., Limited; Monopole, Royal Psycho, Pathfinder, Acatene chainless.

Straits Cycle Agency; Columbia, Raleigh, etc.

E. SPENCER PRATT,

SINGAPORE, *December 8, 1898.*

Consul-General.

THE TEXTILE INDUSTRY OF JAPAN.

In reply to inquiries from the Philadelphia Commercial Museum* relative to the extent of the textile industry of Japan, Consul Lyon, of Hiogo, under date of January 21, sends the following report:

In a recent report on the commerce and industry of Japan, made to the National Association of Manufacturers of Philadelphia, Mr. Robert P. Porter has taken up the subject of the cotton and silk industries in the various provinces of this country, where they have made most progress, and it may be said that comparatively few changes affecting them have been made since.

* Advance Sheets have been sent the museum.

Mr. Robert B. Brennan in 1897 made a report to the British Foreign Office on the textile industries of Japan, he having been aided in his work by English firms in Japan long engaged in exporting and importing textile goods. Mr. Brennan's report will be found a valuable one on that subject and is later than Mr. Porter's. The estimates of the cost of labor given by Mr. Porter in his report are far below the present standard of wages—in fact, the cost of labor in many trades has more than doubled since his work was written, and this condition has greatly enhanced the cost of production.

The Japanese Government published in 1898 a work entitled *Résumé Statistique de L'Empire du Japon*, giving the volume of the home industries of Japan, dealing with the manufacture of cotton, silk, wool, jute, hemp, and linen, both separately and in mixture.

COTTONS.

The manufacture of textile goods in Japan is not confined to certain localities, as in the United States, but extends by means of hand looms all over the country. The spinning wheel was formerly in general use, but during the last twenty years, it has been almost wholly displaced by spinning mills using machinery. More than 1,000,000 spindles are now thus operated, forty-seven mills in Japan producing last year an estimated yield of 650,000 bales of yarn of 400 pounds each. Present returns show that more than 200,000 bales will be shipped to China during the current year, and the home demand for counts averaging 18s. will be nearly supplied by the remaining 450,000 bales. Only one of the spinning mills in Japan has imported the machinery necessary for spinning the higher counts above 30s. The Nippon mill, of Osaka, has done this, but so far has probably not made a success of it. Higher counts are steadily imported from England and in greatly increasing quantities, to meet the home demand. When mill hands with greater skill are to be procured in Japan, the spinning of the higher counts will increase more rapidly, in order to supply the domestic market and the demands from China and Korea.

Increasing demand for the higher counts of cotton yarn explains the rapidly growing market for American cotton, from which it is produced. It would be well for American cotton producers to note this fact, with a view to educating a sufficient number of Japanese workmen to become expert and teach others, in order to extend the sale of American cotton, from which the higher counts are made.

Many of the large class of persons formerly employed in spinning by hand are now engaged in weaving textiles on hand looms. It has recently been computed that more than 600,000 hand looms are in use in Japan, and it is stated that they employ 890,000 women and

50,000 men. As these hand looms are generally operated in private houses, giving a home character to the work, it can readily be seen why such slow progress is being made in the introduction of power-weaving machinery. The hand looms now in use are called "bat-tan" and are an improvement on those formerly used. They cost but about 5 yen (\$2.50 gold) each and take up little room in a house, while a power machine would require a separate building, and with the necessary power would cost, say, nearly 500 yen (\$250 gold). The hand loom will produce about half as much as a power loom, but one person could attend to perhaps four or five of the latter at a time, and thus be able to turn out, say, eight or ten times the product with a power loom as with a hand loom. The convenience, however, of having the hand loom in the house and the difference in its cost will, perhaps, be sufficient to delay the introduction of power looms to any great extent for some time to come. The comparative cost of labor is about 1 to 8 or 10 in favor of the power looms, and this should tend to crowd out the hand looms very fast; but it is not doing so yet, though the progressive spirit of the Japanese will no doubt ultimately cause them to substitute power looms for the hand looms now in use. In regard to spinning machinery, the labor cost is about 1 to 150 in favor of the machine, and this very great difference is, of course, the cause of the rapid introduction of spinning machinery.

The hand looms are handmade, and are principally used in supplying some 1,000,000 pieces of goods, say, 14 inches in width and from 12 to 25 yards in length, to the home market and for export to China and Korea.

SILKS.

The Japanese manufacturers are very conservative in their business methods, and manufacture large quantities of goods only on orders. The largest silk factory in Japan using power looms is the Kyoto Orimono Kaisha, of Kyoto. It imported these machines from France. It was the intention of the company to manufacture silk fabrics for export; but after some years of unsuccessful attempt, the project was abandoned, and the company commenced making satins and "obi" materials for home use. In these lines, it is said, it has been very successful. This mill also manufactures curtain and upholstery materials, and it has found a good market for them in England and Australia. The power looms first obtained have been copied here, and the company is using large numbers of them; but they are not equal to the imported ones.

Silk in its various forms, from the raw material to the finished product, is mainly exported from Yokohama. The industry dates back to an early period, and is to-day in an advanced condition.

Mr. Porter, in his report on the commerce and industries of Japan, has treated the subject most thoroughly. Not much can be said in addition. Exports of manufactured silks from Japan during 1897 were as follows:

Articles.	Quantity.	Value.	
Silk piece goods:		Yen.	
Chirimen (silk crapes).....pieces...	1,005	11,608	\$5,781
Habutai (pongee).....do.....	642,801	9,530,676	4,746,276
Others.....do.....	47,433	297,047	147,929
Silk and cotton mixtures.....do.....	7,123	13,576	6,761
Silk handkerchiefs.....dozen...	1,157,913	3,390,145	1,688,292
Other silk manufactures.....		450,036	224,118

WOOLENS.

There is no doubt a great misapprehension existing in our country as to the necessity for the use of woolen goods in Japan. The climate is thought by many to be such as not to require warm clothing in winter, but this is not the case. During the last winter, which was said to be not as cold as usual at this port, foreigners were clothed as warmly as persons need to be during the cold season in Washington, D. C., and the masses of the Japanese people needed, but did not have, the same protection; and it must be remembered that this locality is a warm one, in comparison with some other parts of the Empire.

The manufacture of woolen goods is a new industry here and a small one, as only about 13 per cent of the woolen textiles used in Japan are made in this country. The raw material is all imported from China, Australia, and London. The four woolen factories of the country are located in Osaka and Tokyo. One is owned and operated by the Imperial Government and manufactures supplies for the army and navy. Some of the better grades of cotton and woolen yarns are made there, but they are mostly imported. A large proportion of the woolen cloths used are made on hand looms, similar to those already referred to.

Importations of wool and woolen fabrics into Japan during 1897 were as follows:

Articles.	Quantity.	Value.	
		Yen.	
Wool.....catties (1½ pounds)...	2,702,486	1,337,424	\$666,037
Woolen cloths.....yards.....	1,613,232	1,943,531	967,878
Woolen mixtures.....do.....	461,764	290,543	144,690

Total value of textile and fiber imports into Japan during 1897.

Articles.	Value.	
	Yen.	
All-wool fabrics, woolen mixtures, wool, and woolen yarns.....	12,677,370	\$6,313,330
Raw cotton and cotton fabrics.....	63,113,602	31,430,574
Raw silk and silk mixtures.....	1,315,661	655,199
Raw flax, hemp, canvas, and linen mixtures.....	1,060,680	528,219
Other manufactured fabrics and goods, as cotton handkerchiefs, towels, velvets, felts, webbings, and other raw materials.....	1,242,936	618,982
Total	79,410,249	39,546,304

A much more general use of woolen products is requisite for the comfort of the people, and all classes are constantly becoming more able to purchase them; hence, there is no doubt that the demand for them will increase.

RUGS.

As stated in my last annual report,* Japanese rugs have deteriorated in quality to such an extent as to greatly check the American demand. The materials used are hemp, jute, cotton, wool, and silk, the two latter separately and in combination. They are made on upright hand looms, which vary from 3 to 24 feet in width. The pattern is worked from the front. This is largely a "home industry." There are no large factories. Only one or two employ more than 100 hands each. Kobé is the center of the rug-making district.

Mr. Brennan states in his report that in the neighborhood of Osaka and Hiogo, there are some 2,000 establishments employing in 1896 about 13,000 females and 5,000 males, producing some 3,000,000 square yards of rugs at prices ranging from 6½ to 20 sen (¾ to 10 cents) per square foot.

Countries from which Japan imports hemp and flax for making rugs, and the value of such imports, are as follows:

Country.	Value.	
	Yen.	
Philippine Islands.....	202,758	\$100,973
British India.....	90,202	44,921
China	390,748	194,592
Great Britain.....	2,867	1,428

Hemp and flax yarn are also imported to the value of 197,105 yen (\$98,058).

KNITTING MACHINERY.

The first knitting machinery used in Japan was brought from England; some has since come from other countries, and the Japanese

*To appear in the forthcoming Commercial Relations, Vol. I.

have copied all, thus deteriorating it. The machines are of hand power and operated in private houses, from one to five being found in a house. The knitting business is not scattered through the country like weaving, but is concentrated in manufacturing centers, a great deal being done in Osaka.

Large quantities of cheap underwear are made here, all from cotton yarn spun in Japan. Cotton and woolen yarns used in making the better grades are imported. Not much woolen underwear is used, the demand being confined to the better classes of the Japanese people, who also wear light-weight all wool with open meshes in summer. This light weight referred to has been made here for some time for the Indian market. The Japanese children have lately begun wearing mixed knitted singlets in the central part of Japan, and, on account of the comfort derived, they should be extensively used in the northern part of this country. They might be, if furnished at low prices; coarse quality would not hinder their sale.

SPINNING MACHINERY.

As stated in my annual report for 1898, nearly all the spinning machinery still comes from England.* American manufacturers of machinery have obtained large orders for other kinds; but they seem to have utterly ignored the constant demand for spinning machinery and for all the other spinning-mill requirements, including engines and boilers. This may also be said in regard to almost all the weaving machinery in the country. The first spinning machines used in Japan were sent from England, where a single firm has supplied more than half the spindles. Another English firm supplies a complete mill equipment, including boilers and engines. Weaving machinery is largely furnished by a third. French and German makers have supplied a considerable quantity of the silk and woolen weaving machinery, and I learn that some woolen machinery for an Osaka mill came from the United States; but our country is practically sending almost none of the large quantity of spinning and similar machinery constantly in demand.

There are 52 spinning and 16 weaving establishments here, using imported machinery. The weaving establishments with machinery are located as follows: Five at Tokyo, four each at Osaka and Kyoto, and one at Nishinomiya, Sidzuoka, and Wakayama. There are four flax (jute) mills making canvas and twine, located in Shimotsuke, Sapporo, Otsu, and Osaka.

* See extracts from Mr. Lyon's annual report in CONSULAR REPORTS No. 220 (January, 1899), p. 32.

INDUSTRIAL CONDITIONS IN JAPAN.

I inclose a clipping from the Hiogo Evening News, an English journal published at this port, dated the 14th instant, containing a synopsis of an address upon the subject of "The present condition of Japanese industry," made by Mr. Ariga Nagafumi, a graduate of the Imperial University at Tokyo, and lately a high official of the Agricultural and Commercial Department.

One of the leading features of the address is his statement that the ratio of increase in industrial exports was 66 per cent in 1887 and 78 per cent in 1897; also, that the ratio of decrease in such imports was 92 per cent in 1887 and 60 per cent in 1897, showing a tendency to decrease in manufactured imports and increase in exports.

JAMES S. LYON,
Consul.

HIOGO, *February 16, 1899.*

THE PRESENT CONDITION OF JAPANESE INDUSTRY.

The actual state of Japanese industry is best explained by statistics. Taking the sum total of the exports to be 100, the ratio of increase of industrial exports was 66 per cent in 1888, 64 per cent in 1889, 67 per cent in 1890, 55 per cent in 1891, 67 per cent in 1892, 71 per cent in 1893, 75 per cent in 1894, 77 per cent in 1895, 74 per cent in 1896, and 78 per cent in 1897. In short, the exports have increased from 66 per cent in 1888 to 78 per cent in 1897. The decrease in the import of industrial products for the same period is shown by the following figures: Ninety-two per cent in 1887, 87 per cent in 1888, 87 per cent in 1889, 73 per cent in 1890, 73 per cent in 1891, 72 per cent in 1892, 76 per cent in 1893, 67 per cent in 1894, 71 per cent in 1895, 71 per cent in 1896, and 60 per cent in 1897. That is, imports of industrial products declined from 92 per cent in 1887 to 60 per cent in 1897. There is thus a tendency to decrease in manufactured imports and to increase in exports.

Of the capital used in Japanese industry, no perfect statistics are obtainable with regard to moneys absorbed in industrial works conducted by partnerships and individuals. But in regard to industrial companies, the increase of capital is from 56,000,000 yen (\$28,000,000)* in 1894 to 62,000,000 yen (\$31,000,000) in 1895, 74,000,000 yen (\$37,000,000) in 1896, and 151,000,000 yen (\$75,500,000) in 1897. That is to say, the capital employed by industrial companies in 1897 is about three times that used in 1894. But all this capital was not actually paid up. The actually subscribed sums were 36,000,000 yen (\$18,000,000) in 1894, 41,000,000 yen (\$20,500,000) in 1895, 48,000,000 yen (\$24,000,000) in 1896, and 74,000,000 yen (\$37,000,000) in 1897. Thus, the actual capital of industrial companies is 74,000,000 yen, to which debentures—4,000,000 yen (\$2,000,000) in 1894, 4,900,000 yen (\$2,450,000) in 1895, 5,500,000 yen (\$2,750,000) in 1896 (that of 1897 is not yet ascertained)—have to be added. Of these debentures, 610,000 yen (\$305,000) in 1894, 420,000 yen (\$210,000) in 1895, and 440,000 yen (\$220,000) in 1896 were actually paid up. Briefly stated, the industrial capital in 1897 was three times that in 1894.

The capital employed by companies carrying on western industries is 140,000,000

* The United States equivalents are stated in round numbers.

yen (\$70,000,000) (of which 74,000,000 yen is paid up), with debentures, etc., as above stated. It consists generally of fixed capital, floating capital for the payment of wages, purchase of raw materials, etc. The interest charged is very high. In the case of one company, 36,943 yen (\$18,977), and in that of another company 26,400 yen (\$13,200), were paid in interest in the first half of 1898. It is thus inevitable that, with high interest and inefficient workmanship, the companies sometimes suffer great losses. The following table illustrates the position of the spinning companies:

Year.	Total number of companies.	Companies making a profit.	Companies sustaining loss.
1893.....	33	29	4
1894.....	43	28	14
1895.....	59	41	18
1896.....	59	41	18
1897.....	66	33	33

A still more deplorable condition is seen in the native industries. Take the case of Fukui, which is famous for the production of habutai, the export of which amounted to 8,000,000 yen (\$4,000,000) last year. But the total capital used in its production is only 500,000 yen (\$250,000), and the smallness of means brings about difficulties and entails enormously high interest. With such a scarcity of capital, the Fukui weavers are compelled to sell cloth at very cheap prices to the agents of the foreign merchants at Yokohama, who make very lucrative bargains.

JAPAN'S TARIFF CONVENTIONS WITH GERMANY AND FRANCE.

Minister Buck transmits from Tokyo, under date of January 9, 1899, copies of the tariff conventions recently concluded by Japan with Germany and France, whereby the ad valorem charges fixed by the tariff conventions annexed to the new treaties with those countries are converted into specific duties. The conventions read:

[From the Japan Gazette, Yokohama, January 7, 1899.]

SUPPLEMENTARY TREATY BETWEEN GERMANY AND JAPAN.

The following supplementary treaty between Germany and Japan was published in the Official Gazette of the 30th of December, 1898:

The Governments of His Majesty the Emperor of Japan and of His Majesty the Emperor of Germany and King of Prussia, in accordance with clause 2 in Article III of the protocol annexed to the treaty of commerce and navigation, signed at Berlin on the 4th of April, 1896, have agreed to the following articles:

(1) The tariff annexed to this treaty shall be substituted for the ad valorem tariff attached to the protocol concluded on the 4th of April, 1896. It shall be subjected to all the stipulations given in Article III of the said protocol as far as applicable and shall be put into force on and after the 1st of January of the thirty-second year of Meiji (January 1, 1899).

(2) This treaty is supplementary to the treaty and protocol concluded on the 4th of April, 1896, and shall be in force during the same period as the latter.

In witness whereof, the undermentioned Viscount Aoki Shuzo, Minister of State

for Foreign Affairs of His Majesty the Emperor of Japan, and Count Casimer Von Leyden, His Imperial Germanic and Prussian Majesty's envoy extraordinary and minister plenipotentiary, having been furnished with the necessary powers, have signed and sealed the present treaty.

Done in duplicate at Tokyo this twenty-sixth day of the thirty-first year of Meiji (December 26, 1898).

VISCOUNT AOKI SHUZO.

COUNT VON LEYDEN.

Annexed tariff.

No.	Articles.	Unit.	Duty.	
			Yen.	\$.
	Cotton tissues:			
1	Velvets, velveteens.....	Square yard...	0.041	\$0.02
2	Cotton tissues of all other sorts, pure cotton or mixed with flax, or other fiber, including wool, cotton, however, predominating, not specially mentioned in this tariff—			
	Drills.....	do.....	.016	.0079
	Duck.....	do.....	.053	.026
	Handkerchiefs in the piece.....	do.....	.011	.005
	Prints.....	do.....	.012	.0059
	Sateens, plain, printed, or figured, brocades, Italians and figured shirtings.	do.....	.017	.0084
	Shirtings—			
	Dyed.....	do.....	.013	.0064
	Gray.....	do.....	.006	.0029
	Twilled.....	do.....	.011	.005
	White or bleached.....	do.....	.010	.0049
	T cloths.....	do.....	.009	.0044
	Turkey red and cambrics.....	do.....	.012	.0059
	Victoria lawns.....	do.....	.006	.0029
	All other sorts of pure cotton tissues, and all tissues of cotton mixed with flax, hemp, or other fiber, including wool, the cotton, however, predominating in weight, not especially provided for in this tariff.	Ad valorem.....	10 p.ct.	.....
	NOTE.—It is expressly understood that ready-made clothing and other made-up articles are not included under the heading of cotton tissues.			
3	Lead, pig and ingot.....	100 kin.....	.316	.157
	Chemicals and drugs:			
4	Amorphous phosphorous.....	Kin.....	.165	.082
5	Bismuth subnitrate.....	do.....	.206	.102
6	Bromide—			
	a. Of potash.....	do.....	.093	.046
	b. All other kinds.....	Ad valorem.....	10 p.ct.	.....
7	Quinine.....	do.....	8 p.ct.	.....
8	Chloride of potash.....	100 kin.....	2.267	1.128
9	Dynamite.....	Kin.....	.056	.027
10	Iodide of potash.....	Ad valorem.....	10 p.ct.	.....
11	Nitrate of potash (saltpeter).....	100 kin.....	.490	.244
12	Salicylic acid.....	Ad valorem.....	10 p.ct.	.....
	Wire:			
13	Telegraph wire—			
	a. Telegraph or galvanized wire of iron or mild steel.....	100 kin.....	.256	.127
	b. All other telegraph wire.....	Ad valorem.....	5 p.ct.	.....
14	Other than telegraph wire—			
	a. Iron and mild steel wire, and small rod not exceeding one-fourth inch in diameter.	100 kin.....	.503	.25
	b. Steel (other than mild) wire and rod not exceeding one-fourth inch in diameter.	do.....	1.819	.905
	NOTE.—By the term "mild steel" as used in this tariff is understood mild steel manufactured by the Siemens, Bessemer, basic, or similar processes, and approximating in value to iron of the same class in this tariff.			

Annexed tariff—Continued.

No.	Articles.	Unit.	Duty.	
	Iron, mild steel, and steel:			
15	Pig and ingot—		<i>Yen.</i>	
	<i>a.</i> Of iron and mild steel.....	100 kin.....	0.083	\$0.041
	<i>b.</i> Of steel (other than mild).....	Ad valorem.....	5 p. ct.	
16	Rails—			
	<i>a.</i> Of iron and mild steel.....	100 kin.....	.129	.064
	<i>b.</i> Of steel (other than mild).....	Ad valorem.....	5 p. ct.	
	Bars, rods, and plates:			
17	Of iron and mild steel—			
	<i>a.</i> Bar and rod exceeding one-fourth inch in diameter..	100 kin.....	.261	.129
	<i>b.</i> Plate and sheet.....	do.....	.296	.147
18	Of steel (other than mild).....	Ad valorem.....	7½ p. ct.	
19	Sheet, galvanized, both plain and corrugated—			
	<i>a.</i> Of iron and mild steel.....	100 kin.....	.740	.368
	<i>b.</i> Of steel (other than mild).....	Ad valorem.....	10 p. ct.	
20	Tinned plates—			
	Of iron and mild steel—			
	<i>a.</i> Ordinary.....	100 kin.....	.691	.344
	<i>b.</i> Crystallized.....	Ad valorem.....	10 p. ct.	
	Of steel (other than mild).....	do.....	10 p. ct.	
21	Pipes and tubes.....	do.....	10 p. ct.	
22	Railway carriages for passengers and parts thereof.....	do.....	5 p. ct.	
23	Iron and mild steel nails (including wire nails, spikes, sprigs, tacks, and brads):			
	<i>a.</i> Plain.....	100 kin.....	.573	.285
	<i>b.</i> Galvanized.....	Ad valorem.....	10 p. ct.	
24	Bolts and nuts, plain and galvanized.....	do.....	10 p. ct.	
	Window glass, ordinary:			
25	Uncolored and unstained.....	100 sq. feet.....	.302	.15
26	Colored, stained, and ground.....	Ad valorem.....	10 p. ct.	
	Dyes, dyestuffs, and paints:			
27	Aniline dyes.....	do.....	10 p. ct.	
28	Alizarine dyes.....	do.....	10 p. ct.	
29	Logwood extract.....	do.....	10 p. ct.	
30	Paint in oil.....	100 kin.....	1.304	.649
	Yarns, plain or dyed:			
31	Of cotton.....	do.....	4.180	2.081
32	<i>a.</i> Of linen, for weaving purposes.....	do.....	6.527	3.25
	<i>b.</i> Of hemp or jute, for weaving purposes.....	Ad valorem.....	8 p. ct.	
	Of wool, also combed, or worsted—			
33	For weaving purposes.....	100 kin.....	8.000	3.98
34	For other purposes.....	do.....	9.169	4.56
	NOTE TO NOS. 31, 32, 33, AND 34.—It is expressly understood that all mixed yarns of cotton, linen, hemp, jute, or wool (combed or worsted) are to be classed for duty according to the material predominating.			
35	Yarns, all sorts, not specially provided for in this tariff.....	Ad valorem.....	10 p. ct.	
36	Silk-faced cotton satin.....	do.....	10 p. ct.	
37	Hops.....	Kin.....	.029	.14
38	Hats, including also felt hats.....	Ad valorem.....	10 p. ct.	
39	Caoutchouc, manufactures of.....	do.....	10 p. ct.	
40	Linen tissues:			
	Canvas.....	Square yard...	.047	.023
	All other sorts.....	Ad valorem.....	10 p. ct.	
	NOTE.—It is expressly understood that ready-made clothing and other made-up articles are not included under the heading of linen tissues.			
	Leather:			
41	Sole.....	100 kin.....	5.600	2.83
42	Other kinds.....	Ad valorem.....	10 p. ct.	
43	Railway engines and parts thereof.....	do.....	5 p. ct.	

Annexed tariff—Continued.

No.	Articles.	Unit.	Duty.	
	Milk:		<i>Yen.</i>	
44	Condensed or desiccated..... (All proportionately for tins of other weight.)	Doz. 1-lb. tins.	.123	\$0.061
45	Sterilized	Ad valorem....	5 p. ct.	
46	Paper of all kinds:			
	<i>a.</i> Printing paper—			
	1. Weight not exceeding 24 pounds per 500 sheets of not less than 1.086 square inches per sheet.	100 kin.....	.800	.398
	2. All other kinds.....	do	1.163	.579
	<i>b.</i> All other kinds of paper.....	Ad valorem....	10 p. ct.	
47	Oil, paraffin.....		10 p. ct.	
48	Wax, paraffin.....	100 kin.....	.544	.27
49	Cement, Portland.....	do	.065	.032
50	Clocks (excepting watches) and parts of clocks.....	Ad valorem....	10 p. ct.	
	Woolen and worsted tissues of all kinds, pure or mixed with other material, wool, however, predominating:			
51	Blanketing and whipped blankets, plain woven.....	100 kin.....	7.458	3.714
52	Flannels—			
	<i>a.</i> All wool.....	Square yard..	.044	.0219
	<i>b.</i> Wool and cotton mixture.....	do	.030	.0149
53	Mousselines de laine—			
	<i>a.</i> Plain or white.....	do	.018	.0089
	<i>b.</i> All other kinds.....	do	.021	.01
54	Cloth—			
	<i>a.</i> Wholly of woolen or worsted yarn, or of woolen and worsted yarn, such as broad, narrow, and army cloth, cassimeres, tweeds, and worsted coatings.	do	.093	.046
	<i>b.</i> In part of woolen or worsted yarn and in part of cotton yarn, such as pilot, president, and union cloth.	do	.039	.019
55	Italian cloth, including Italian cloth in which cotton pre- dominates.	do	.029	.014
56	Other tissues—			
	Alpacas.....	do	.075	.037
	Buntings	do	.031	.015
	Long ells.....	do	.036	.0179
	Serges—			
	<i>a.</i> Where the warp is worsted and the weft woolen.....	do	.056	.0278
	<i>b.</i> All other kinds.....	Ad valorem....	10 p. ct.	
	All other sorts, pure or mixed with other material, the wool, however, predominating in weight, not specially provided for in this tariff.	do	10 p. ct.	
	NOTE.—It is expressly understood that ready-made clothing and other made-up articles are not included under the head- ing of woolen and worsted tissues.			
	Zinc:			
57	Block, pig and slab or plates.....	100 kin.....	.400	.199
58	Sheet	do	.830	.413
59	Sugar, refined:			
	<i>a.</i> No. 15 to No. 20, inclusive, Dutch standard in color.....	do	.748	.372
	<i>b.</i> Above No. 20, Dutch standard in color.....	do	.827	.41

Weights and measures.

The kin mentioned in this tariff is the Japanese weight. It is equal to 600 grams of the metric system of weights, or 1.32277 pounds English avoirdupois weight.

The pound is the English avoirdupois weight.

The square yard, square foot, and square inch are the English imperial surface measures.

Rule for calculating ad valorem duties.

Import duties payable ad valorem under this tariff shall be calculated on the actual cost of the articles at the place of purchase, production, or fabrication, with the addition of the cost of insurance and transportation to the port of discharge, as well as commission, if any exists.

Rule for the measurement of tissues.

In determining the dutiable width of any tissue, the customs shall discard all fractions of an inch not exceeding half an inch, and shall count as a full inch all fractions exceeding half an inch.

NOTE.—It is understood that selvages shall not be included in the measurement of tissues.

Protocol.

The undersigned, apart from the supplementary convention signed this day, have agreed upon the following stipulations:

(1) With regard to the yen mentioned in the tariff annexed to the aforesaid supplementary convention, it is understood that whatever rights belong or may belong to Great Britain in virtue of the description of the yen appended to the Anglo-Japanese conventional tariff dated the 16th of July, 1895, shall equally be extended to Germany. The Government of His Majesty the Emperor of Japan, however, wishes it to be understood that this declaration creates no inference as to the existence in favor of Great Britain of any rights in the direction indicated.

(2) Respecting the question of certificates of origin at place of production and the legalization of invoices, it is understood that the words "other proper authorities" appearing in Article II of the Japanese imperial ordinance No. 385, dated the twenty-seventh day of the tenth month of the thirtieth year of Meiji, corresponding to the 27th of October, 1897, are held to include German police officers, in the absence of competent Japanese consular authorities, and that the term "competent Japanese consular authorities" does not include Japanese honorary consuls. The Government of His Majesty the Emperor of Japan will take the necessary measures to extend to the German chambers of commerce the same competence under like circumstances as is possessed by German police officers.

The Government of His Majesty the Emperor of Japan engage that under the new tariffs, all imports of a dutiable value not exceeding 100 yen (\$49.80) shall be exempt from any obligation of being accompanied by legalized invoices.

The undersigned have agreed that the stipulations contained in this protocol shall have the same binding force and the same duration as the supplementary convention signed this day.

In witness whereof the undermentioned have signed the same and have affixed thereto their seals.

Done in duplicate at Tokyo, this twenty-sixth day of the twelfth month of the thirty-first year of Meiji, corresponding to the 26th of December, 1898.

VISCOUNT AOKI. (L. S.)

COUNT VON LEYDEN. (L. S.)

[From the Japan Gazette, Yokohama, January 6, 1899.]

THE SUPPLEMENTARY TREATY BETWEEN FRANCE AND JAPAN.

The supplementary treaty between Japan and France which has recently been concluded was published in the extra of the Official Gazette of the 30th of December. It reads as follows:

His Majesty the Emperor of Japan and the President of the French Republic, being desirous of fulfilling the agreement specified in clause 2 of Article I of the

protocol annexed to the treaty of commerce and navigation between Japan and France concluded at Paris on the 14th of August, 1896 (which agreement stipulates that the ad valorem tariff attached to the said protocol shall be replaced by a specific tariff within six months from the date of ratifications and exchange of the said treaty, the term of the six months in question being afterwards postponed), have appointed Viscount Aoki Shuzo, Junii, First Order of Merit, Minister for Foreign Affairs, as representative of His Majesty the Emperor of Japan, and François Jules Harmand, Commander de la Legion d'Honneur, First Class Order of the Rising Sun, as representative of the President of the French Republic. The said representatives having mutually shown the necessary powers furnished by the respective sovereigns and found them to be correct, have conferred together and agreed to the following articles:

ARTICLE I. The tariff hereto annexed shall be substituted for the tariff annexed to the protocol of the 4th of August, 1896, and shall be applicable to all French products imported into Japan. The tariff shall be put into force immediately after the copies of this treaty are ratified and exchanged.

ART. II. This treaty shall remain in force during the same period as that for the treaty and protocol concluded on the 4th of August, 1896.

ART. III. This treaty shall be subject to ratifications to be exchanged at Tokyo as soon as possible within six months from the date of its signature.

Done in duplicate at Tokyo, twenty-fifth day of the twelfth month of the thirty-first year of Meiji, corresponding to the 25th day of December, 1898.

VISCOUNT AOKI SHUZO.

J. HARMAND.

Annexed tariff.

No	Articles.	Unit.	Duty.	
			Yen.	
1	Aniline dyes.....	Ad valorem....	10 p. ct.	.....
	Cotton tissues:			
2	Drills.....	Square yard...	0.016	\$0.007
3	Ducks.....	do.....	.053	.026
4	Handkerchiefs in the piece.....	do.....	.011	.005
5	Prints.....	do.....	.012	.0059
6	Sateens, plain, figured or printed brocades, Italians and figured shirtings.	do.....	.017	.008
	Shirtings—			
7	Dyed.....	do.....	.013	.0064
8	Grey.....	do.....	.006	.0029
9	Twilled.....	do.....	.011	.005
10	White or bleached.....	do.....	.010	.0049
11	T cloths.....	do.....	.009	.004
12	Turkey red cambrics.....	do.....	.012	.005
13	Plush or velvets.....	do.....	.041	.02
14	Victoria lawns.....	do.....	.006	.0029
15	All other kinds of pure cotton tissues and all tissues of cotton mixed with flax, hemp, or other fiber, and also wool, the cotton, however, predominating in weight, not especially provided for in this tariff.	Ad valorem....	10 p. ct.	.....
	NOTE.—It is to be understood that ready-made clothing and other made-up articles are not included under the heading of cotton tissues.			
16	Iron, bar and rod, exceeding one-fourth of an inch in diameter	100 kin.....	.261	.129
	NOTE.—The word "mild steel," as used in this tariff, is held to mean mild steel manufactured by the Siemens, Bessemer, basic, or similar processes and approximating in value to iron of the same class in this tariff.			

Annexed tariff—Continued.

No.	Articles.	Unit.	Duty.	
			<i>Yen.</i>	
17	Logwood extract.....	100 kin.....	2.150	\$1.07
18	Silk and silk cotton sateens.....	Ad valorem.....	10 p. ct.	
19	Steel, pig and ingot.....	do.....	5 p. ct.	
	Woolen and worsted tissues of all kinds, pure or mixed with other material:			
20	Alpacas.....	Square yard.....	.075	.037
21	Blanketing and whipped blankets.....	100 kin.....	7.458	3.71
22	Buntings.....	Square yard.....	.031	.015
23	Cloth—			
	<i>a.</i> Wholly of woolen yarn or worsted or of woolen and worsted yarn, such as broad, narrow, and army cloth, cassimere, tweed, and worsted coatings.	do.....	.093	.046
	<i>b.</i> In part of woolen or worsted yarn and in part of cotton yarn, such as pilot, president, and union cloth.	do.....	.039	.019
24	Flannels—			
	<i>a.</i> Of wool.....	do.....	.044	.0219
	<i>b.</i> Wool and cotton.....	do.....	.030	.0149
25	Italian cloth.....	do.....	.029	.0144
26	Long ella.....	do.....	.036	.0179
27	Mousseline de laine—			
	<i>a.</i> Plain and white.....	do.....	.015	.0074
	<i>b.</i> Dyed and printed.....	do.....	.021	.01
28	Serges—			
	<i>a.</i> Where the warp is worsted and the woof woolen.....	do.....	.056	.0278
	<i>b.</i> All other kinds.....	Ad valorem.....	10 p. ct.	
29	All other kinds, pure or mixed with other material, the wool, however, predominating in weight, not specially provided for in this tariff.	do.....	10 p. ct.	
30	Woolen and worsted yarn, plain or dyed.....	100 kin.....	8.000	3.98
	NOTE.—It is to be understood that ready-made clothing and other made-up articles are not included under the heading of woolen and worsted tissues.			
31	Soap (ordinary).....	do.....	.972	.484
32	Candles (made of animal fat or wax).....	do.....	2.146	1.068
33	Wines of all kinds, not effervescent (brewed by natural fermentation):			
	1. Not containing more than 16 per cent of alcohol—			
	<i>a.</i> In barrels.....	Hectoliter.....	1.242	.618
	<i>b.</i> In 12 bottles, each containing more than half a liter but less than a liter, or 22 bottles, each containing less than half a liter.	Case.....	.760	.378
	2. Containing more than 16 per cent of alcohol, but not exceeding 24 per cent—			
	<i>a.</i> In barrels.....	Hectoliter.....	7.925	3.946
	<i>b.</i> In 12 bottles, each containing more than half a liter but less than a liter, or 24 bottles, each containing less than half a liter.	Case.....	.680	.338
	NOTE.—Vermuth is included under the heading of wines (not effervescent), but the percentage of alcohol shall be subject to stipulations made in this item.			
34	Champagne and all other kinds of effervescent wine (brewed by natural fermentation) in 24 bottles, each containing not more than half a liter, or in 12 bottles, each containing more than half a liter, but not exceeding a liter.	do.....	1.550	.771
35	Printing machine.....	Ad valorem.....	5 p. ct.	
36	Drawing instrument.....	do.....	10 p. ct.	

Annexed tariff—Continued.

No.	Articles.	Unit.	Duty.	
37	Small wares: Imitation personal ornaments exclusively made of aluminium, aluminium bronze, nickel, German silver, white metal, copper, steel, zinc, lead, pewter, iron, and other common metals or jet, hardened wood, seeds, shells, horns, celluloid, animal bones, and other common material— 1. Ornaments gilded, silver plated, worked with nitric acid, polished, of imitation lacquer, tin plated, oxidized, nickel plated, set with vitrification cloisonne, imitation pearls, genuine or imitation corals, imitation precious stones. 2. Ornaments set with pearls, ivory, or tortoise shells, covered with gold or silver foils (the value of such gold or silver not to exceed the value of principal material composing ornaments). NOTE.—The word "small wares" as used in this tariff is held to mean rings, earrings, bracelets, brooches, medallions, combs, hairpins, ornaments for bonnets, pins for neckties, chains and ornaments for watches, snuff boxes, buttons (ordinary buttons excepted), purse, ornaments for sticks and umbrellas, pencils, and other small ornaments.		Yen.	
		Ad valorem.....	10 p. ct.	.....
		do	10 p. ct.	.....
38	Opera glasses— a. Ornamented with shells, pearls, ivory, gold, silver, platinum, and other valuable and luxurious articles or set with precious stones or pearls. b. All other kinds of opera glasses.....	Each	0.750	\$0.373
		do	.250	.124
39	Perfumery— a. For toilet soaps..... b. In liquid, <i>i. e.</i> , essential and perfume oil, vinegar, perfume water, alcohol, and other liquid perfumery. c. All other perfumery not in liquid, <i>i. e.</i> , salt, powder, cosmetic, pomade, paste, and other manufactured toilets. NOTE.—Natural and artificial musk, civet, and gray amber are not included under this heading.	Kin..... do	.070 .092	.034 .0458
		Ad valorem.....	10 p. ct.	.....

Weights and measures.

The kin mentioned in this tariff is equivalent to 600 grams (1.3327 pounds) French measurement.

The yard is equal to 0.9144 meters French.

The square yard is the French 0.8361 square meter.

The hectoliter is equal to 100 liters French.

The yen (49.8 cents) is the standard value of Japanese currency.

Rule for calculating ad valorem duties.

Duties payable ad valorem under this tariff shall be calculated on the actual cost of the articles at the place of purchase, production, or fabrication, with the addition of the cost of insurance and transportation from the place of purchase, production, or fabrication, to the port of discharge, as well as commission, if any exists.

Rules for the measurement of tissues.

In determining the dutiable width of any tissue, the customs shall discard all fractions of an inch not exceeding half an inch, and shall count as a full inch all fractions exceeding half an inch.

NOTE.—It is understood that selvages shall not be included in the measurement of tissues.

We, Mutsuhito, the Emperor of Japan, after having carefully examined the articles of this supplementary treaty signed by the representatives of France and Japan on the 25th of December, 1898, have found it to our satisfaction and given it the necessary ratification.

In witness whereof, we personally subscribed ourselves and caused the seal to be affixed at the palace in Tokyo this 29th day of December, the thirty-first year of Meiji.

IMPERIAL SIGNATURE SEAL SIGNED.
VISCOUNT AOKI SHUZO,
Minister for Foreign Affairs.

CLOCK TRADE IN JAPAN.*

Clocks are manufactured in various parts of the Empire of Japan to such an extent that the importation of all but the very cheapest quality has been virtually stopped. The most extensive manufacture is carried on in Nagoya, where there are seven factories, the largest of which—the Hayashi factory—has an output of 7,000 to 8,000 clocks per month. Kyoto produces about 5,000 clocks in the same period. Osaka has one factory turning out over 3,000 per month, and Tokyo two factories producing about 5,000 clocks. It is estimated by those best informed that over 30,000 clocks are made in Japan every month. The factories in general are experiencing financial difficulties, and in the case of those at Nagoya, the clocks produced are being sold at ridiculously low prices. It is believed that all the factories are losing money, owing to the stagnation in trade and the rise in the prices of labor and material.

These factories, it is said, make nearly all the styles of clocks formerly imported from the United States, particularly the eight-day, 8 and 10 inch dial, drop octagon clock. American movements are exactly imitated, down to the latest improvements under various American patents. Everything pertaining to a clock is made here, except the springs, which come from America. Up to two years ago, these springs were largely imported from Germany; but since that time, they have been imported from the United States, on account of the superior quality and cheapness of price offered by our country. Dealers tell me that the American spring has now almost

* This report was made in answer to inquiries by a New York export association, to which Advance Sheets have been sent.

ousted the German spring from the Japanese market. Japanese manufacturers are beginning to import steel for clock springs and have done some little in the way of manufacturing, but have not succeeded as yet in making a good article. There are some eight-day clock works imported from the United States and fitted with cases here, as they are of superior quality and are better timekeepers; but the number is very limited.

Japanese factories make an eight-day drop octagon clock for 27.50 yen (\$13.75 in United States gold) per dozen; this includes dial and wooden case. I understand that American works cost about the same laid down here, exclusive of dial, case, and the duty, which latter is now 10 per cent. During the year 1898, 150,000 ordinary alarm clocks were imported from Germany, at the cost of about 1 yen (50 cents in United States currency) each, and this no doubt accounts for the fact of Germany furnishing nearly all the clocks imported during the past year.

JOHN F. GOWEY,
Consul-General.

YOKOHAMA, *January 21, 1899.*

FERTILIZERS IN JAPAN.

As constant cultivation of the soil is necessary in Japan to raise crops sufficient to sustain its population, fertilizers must be used to an enormous extent; and I believe that there is a possibility of American manufacturers of commercial fertilizers finding a market for considerable quantities of their product.

In the year 1897, there were imported into this consular district the following commercial fertilizers:

Articles.	Quantity.	Value.
	<i>Tons.*</i>	
Oil cake (known also as "bean cake").....	101,457	\$1,651,163
Beans, pease, and pulse (known also as "seed cake," and including cotton-seed cake).....	139,844	2,933,029
Dried sardines.....	7,473	143,755
Bones.....	750	30,582
Total.....	249,524	4,758,529

*Of 2,240 pounds.

Besides these large importations, which appear in the Japanese customs returns and are therefore readily accessible, there was probably almost as much more, at least of the sardines and other fish, brought into this district from other parts of Japan, particularly the Hokkaido, and it would not be unreasonable to assert that the value of this industry amounts to something like \$7,000,000.

The imported materials are broken up into small pieces and thrown into vats, where they are mixed with night soil, animal and vegetable refuse (all of which is carefully preserved for the purpose), and water. When the fields are prepared for planting, the mixture is poured into the rows or scattered over the surface and thoroughly mixed with the soil in preparing rice fields. Afterwards, it is applied direct to the growing plants from small hand dippers.

A somewhat different method would have to be followed if the Japanese are to be induced to try American commercial fertilizers, but it is believed that the farmers can be taught to use them properly.

I have sent to the Department six samples for analyses.* The fertilizers which these represent sell at wholesale in quantities of from 25 piculs (3,330 pounds) upwards, at the following prices per picul (133⅓ pounds):

Fertilizer.	Price.	
	Yen.	
Whale white bone.....	2.50	\$1.245
Sardines	4.30	2.14
Seed cake:		
No. 1.....	2.20	1.095
No. 2.....	1.82	.906
Cotton-seed cake.....	1.50	.747
Bean cake.....	2.60	1.29

The following firms may be communicated with, if further information as to the details of the business be desired: China and Japan Trading Company, Limited; American Trading Company; Holme, Ringer & Co.; and Browne & Co.

CHARLES B. HARRIS,
Consul.

NAGASAKI, *January 9, 1899.*

COTTON SPINNING IN CHINA AND JAPAN.

Consul-General Gowey, of Yokohama, on December 30, 1898, says:

The inclosed clippings from local newspapers present instructive information as to the present depressed condition of cotton-spinning industries in Japan and China. The Japan Mail of December 30 has the following:

The current year has been a bad one for the cotton-spinning industry in the Far East. The Ewo Cotton Mill, of Shanghai, from October, 1897, to October, 1898, actually made a considerable loss, which, however, it would be misleading to state in figures, part of it being due to causes not connected with the working of the

*Sent with copy of report to Department of Agriculture.

factory. Mr. Alford, of Messrs. Jardine, Matheson & Co., spoke at considerable length when presenting the unfavorable report to the shareholders on the 21st instant. He attributed the trouble mainly to the abnormal price that the company had to pay for raw material. But he offered no explanation of the fact, nor can we derive any information from his somewhat vague suggestion that "experience of the local market for the raw material had not proved valueless" for purposes of future working. Our readers may remember that from the outset we expressed doubts as to the prospects of the cotton-spinning industry in Shanghai, our forecast being that if the Chinese authorities did not tax the finished product of the mills, they would tax the raw material on its way to the mills. Whether the latter measure has been adopted, we do not know; but it is certainly very disheartening to learn that one of the chief advantages foreseen by the promoters of the industry—namely, an abundant supply of cheap material at their doors—has thus far proved illusory. Mr. Alford did not say anything about cost of labor, yet we have been informed by persons whose knowledge of Shanghai affairs should be unimpeachable that the Chinese in Shanghai have combined to demand large figures, and, further, that it has been found impossible to employ female labor, the small-footed woman being unable to move about with sufficient rapidity. One of Mr. Alford's remarks was that the tendency of the market had been to favor India and Japan during the year. The Japanese would scarcely indorse that dictum. The Shogyo Shimpo gives figures showing the average dividends paid by the Japanese spinning companies during the past six years:

Year.	First half year.	Second half year.
	<i>Per cent.</i>	<i>Per cent.</i>
1892	11.16	14.6
1893	11.1	13
1894	12.4	7
1895	9.4	1.9
1896	9.4	9.2
1897	9.4	4.8
1898	5.9	.....

Thus the figure for the first half of the present year is 37 per cent less than the lowest corresponding figure in any preceding year. The Tokyo journal, while lamenting such an infelicitous result in the case of an industry whose products have come to stand second on the list of Japan's exports, seems to find no better reason than that, owing to the unwarrantably large dividends which were paid at the outset in order to encourage shareholders, capital was unduly attracted to the enterprise—overproduction, in short. That may be true to some extent, but we have heard another reason assigned by experts, namely, that the Japanese mills have hitherto been obliged to lay in large stocks of raw material, instead of buying just enough to meet the requirements of the time, and that the cost of the capital thus invested has greatly crippled their operations.

The Japan Gazette, of December 29, commenting on the same conditions, says:

Various causes may be ascribed for this unsatisfactory state of affairs, the chief of which seems to be the lack of preparation for the future on the part of the spinners in ordinary times. Experience shows that all spinning companies having declared as much dividend as possible in time of prosperity, without paying the least attention to the future, have now been compelled to pursue the same plan,

even when they are at their worst, fearing lest they should lose the confidence of their shareholders. The consequence has been the gradual decrease of reserve funds which, when compared with the reserve funds of like companies in Europe and America, are wonderfully small. It is reported that the Government is being asked to grant the spinners a certain amount of "export encouragement money." If the spinners had made all the necessary reserve fund in ordinary times, they would not be compelled to have recourse to such expedients, even though they might have met with difficulties.

REPORT OF THE FRENCH BUSINESS MISSION TO CHINA.

The commission sent out in 1895 by the Lyons Bureau of Commerce to study the conditions in China has just made public a most exhaustive report, which should prove of real value to Americans who contemplate investing or settling in that country.

The first part of the book is devoted to a description of the travels of the commission, the second part to a detailed report of the business conditions in the Chinese Empire, the third contains the conclusions of the commission and calls attention to possible openings for French commerce. The reports by specialists on the mining, silk, oil, and other special branches of Chinese industry are especially valuable. The commission started from Tonkin, traveled extensively in southern China, descended the Yangtze River almost from source to outlet, and skirted the coast from Hongkong as far north as Peking. A large part of the country traveled over in southern China was practically unexplored, and the descriptions of Chinese life are both novel and extremely interesting. The different members of the party traveled in all over 12,000 miles on Chinese territory.

The report calls attention to the fact that, according to the returns of the Chinese customs authorities, the trade between China and Hongkong is given as British, whereas in reality Hongkong is distinctively a port of transit, and that an important part of the foreign and coast trade of China passes through that port and is incorrectly designated as British.

The commission compares the statistics of the Chinese customs authorities with those of the published export statements of countries trading with China and finds that out of a total of \$120,000,000 no less than \$45,700,000 of the trade between Hongkong and the Chinese Empire belongs to the United States, France, and Germany.

According to the Chinese custom-house reports, the import trade from the United States is given at \$24,000,000 per annum; but it is estimated by the commission at \$39,300,000. It is further estimated that, instead of two-thirds, only 40 to 50 per cent of the foreign trade

of China is with Great Britain; and the conclusion is drawn from all the facts collected by the commission that there exists in China a large and promising field for the enterprise of other nations.

This would seem to be substantiated by the fact that the trade of Germany with the Chinese Empire has increased 70 per cent during the four years ended December 31, 1897. It is certainly a significant fact that of the twelve members who composed the French commission, five have since returned to China for commercial purposes.

The report, which is published in book form by Messrs. Rey et Cie, No. 4, rue Gentil, Lyons, France, includes 900 pages, with 180 illustrations. At a time when the commercial relations of the United States with the Far East have assumed such a new and important character, this exhaustive and conscientious report, made by a board of experts after the most thorough and comprehensive study of the situation, would seem to constitute a most valuable addition for Americans to the economic literature of the Chinese Empire.

FRANK H. MASON,
Consul-General.

BERLIN, *February 7, 1899.*

CURRENCY IN CHINA.

In a letter to a correspondent in Tennessee (to whom Advance Sheets have been sent), Consul-General Goodnow, of Shanghai, under date of January 8, 1899, says:

The Mexican dollar is the coin generally used in China among foreigners. A clean Mexican dollar passes current in all the treaty ports and at all considerable towns in the interior which trade direct with the treaty ports. In the interior of China and in the smaller towns, block silver is used. The silver is cast in the form of the sycee, or shoe, on which is stamped the fineness; and in making purchases, a piece is cut off and sold to the local bank for its equivalent in copper cash. Of this cash, 1,800 equal a gold dollar, and one can judge of the standard of wages and the scale of expenditures where everything is estimated by cash. Cash, however, are the real circulating medium of the Chinese of the greater part of China; and the Mexican dollar is the ordinary circulating medium only in connection with foreigners. A "chop" dollar—that is, one on which one or more firms have stamped their monogram, or chop, insuring its genuineness—circulates at a discount below the clean dollar of from 2 to 6 per cent, varying at different times and in different places. The subsidiary coins are 5, 10, and 20 cent pieces; but just now, a dollar is worth more than the smaller coins making up the 100 cents. Why this is so is a mystery to me, but the fact remains

that to-day in Shanghai a clean Mexican dollar is worth ten 10-cent pieces and 18 copper cash.

There are Chinese coins imitating Mexicans, but they only pass current in the viceroyalty where they are minted. Several of the banks issue paper currency based on Mexican dollars. This currency varies in value at the different ports. I have in my pocket four bills of the Hongkong and Shanghai Bank, issued by the Hongkong branch, each promising to pay 10 Mexican dollars. The Shanghai branch of the same bank will only give me \$38.60 Mexican for the four bills, which are worth at par \$40, thus discounting 5 per cent the bills of their own bank issued in another city. These bills would be still further discounted in Tientsin or Chefoo. This seems very odd to an American who has never been obliged to note what bank issued the bills he has from time to time been fortunate enough to have in his pocket; but in all this, there is no question of the solvency of the bank. The Hongkong and Shanghai Bank is one of the great money-making banks of the world. The fluctuation in value of these bills seems to come from the fluctuating character of a currency based on silver, aggravated in this country by the lack of speedy communication.

Ninety-nine cents gold is also equal to 1 haikwan tael, 3 mace, and 8 candereens (1.38 taels). That is the customs tael. It is never used for banking purposes, but there are at least thirteen other varieties of the tael in China. Ninety-nine cents gold is equal to 1.53 Shanghai taels, while it equals 1.39 Takau taels. The other taels range between these two in value. And yet each of these different varieties of taels represents a Chinese ounce of silver. The values I have given here are the values fixed by the United States Mint for this quarter. But the banks and large business houses get the value of silver from London twice a day, and the value often varies from morning to afternoon; and the actual value, especially at the smaller ports, varies decidedly from the value as fixed by the great markets of the world. For instance, the Mint declared October 1 that one Fuchau tael equaled 65.3 cents in United States gold, while in Fuchau, a Fuchau tael October 1 equaled 64.1 cents in gold.

Although both are based primarily on the bullion value of silver, the relation of the tael and the Mexican dollar to gold does not always vary equally. There is no coin called a tael. The tael is simply a weight, the Chinese ounce, and consequently must vary with the bullion value of silver. The Mexican dollar (coin and bank bills based on coin) is the medium of exchange in ordinary business, and an extra demand for money in any particular place raises the value of the coined dollar temporarily in that place. When the extra demand is over, the dollar sinks to its bullion value. It can be

readily seen, however, that a scarcity of coined money at any particular place will add to the value of the amount available there, although business may remain at its ordinary level. The banking business throughout all the East is dominated by one corporation, which has branches in all the prominent cities. The temptation must be very great to create a scarcity of money in particular localities in order to raise the rate of interest and increase the value of its holdings in coin. This can be more easily done, from the fact that communication is almost entirely by water, and boats are both slow and infrequent.

The Japanese yen and the Hongkong dollar both circulate in a few ports, if chopped by the local banks, but they enter very slightly into the medium of exchange. It seems to me, once in a while, that the banks deliberately add to the complications of exchange. For instance, at Fuchau the Fuchau tael is not the banking standard. For purposes of computation, a Yang Ping tael is used; and to translate the value of the chopped dollar, which is the ordinary medium of exchange there, into United States gold, a somewhat intricate problem in arithmetic is to be worked out. One thousand chopped dollars equal 777 Yang Ping taels; 100 Yang Ping taels equal 133.3 Fuchau taels; a Fuchau tael equals 64.1 cents in United States gold. A European usually has nervous prostration before he finds out what his gold is really worth in chop Mexicans. When this bit of arithmetic has been solved, you still have not arrived at the actual value of your gold. It is not always easy to find what an actual gold piece is worth in the circulating medium of China. I sent out a man this morning with \$100 in American gold coin. The bank offered him \$197.40 Mexican. The Chinese gold guild offered \$199, while the Chinese jewelry store said that they would give \$200, if the rate had not changed since 4 o'clock yesterday. At the same time, the bank asked me \$204.85 Mexican for a draft for \$100 gold on its branch in New York City.

The people who suffer from this fluctuation in the circulating medium are the wage earners. About a year ago, silver was falling in value very fast, and the shopkeepers, by a concerted movement, raised the price of commodities 10 per cent. The price of labor, however, did not advance. Again, shopkeepers raised prices 10 per cent. Still wages did not advance. Since that time, silver has gradually appreciated. The price of commodities has not, however, been lowered from the higher prices fixed when silver was at the bottom. In this country, with the value of the medium of exchange constantly shifting, all business is gambling. Even those paid in gold are badly affected by these changes. As I have said, prices are now maintained at the high level in silver fixed a year ago, when

silver was lowest; but my salary, paid in gold, is worth 6 per cent less in the silver into which I must exchange it to pay my bills than it was a year ago.

Throughout the business uncertainties and troubles arising from the silver currency, I notice that the banks are the most prosperous institutions here. They charge you for changing your gold into taels and from taels into silver dollars. You must take the silver they give you; but a bank may and often does refuse to receive back the silver dollars which only a few hours before it paid out. Merchants, wage earners, and laborers all suffer by the uncertainty of exchange; but the banks thrive on that same uncertainty.

NUTS IN CHINA.*

Peanuts are grown in these provinces to the extent of about 1,000 tons. About 100 tons were shipped to Canton this year for the purpose of expressing the oil. Price ranges from \$2 to \$3 † per cwt.

Chestnuts are grown to the extent of about 500 tons, but not for export. Price ranges from \$3 to \$5 per cwt.

Hazelnuts are grown at a great distance, and only a few hundred-weights come here for sale. Price ranges from \$4 to \$6 per cwt.

Walnuts are grown to the extent of about 1,000 tons, of which about 500 tons are exported. Price ranges from \$3 to \$7 per cwt. The above are only used as an adjunct to food—not as a regular article of diet.

Walnuts are sometimes eaten raw, sometimes used (like almonds) to flavor cakes, and sometimes preserved in sugar. Hazelnuts are occasionally eaten raw; more frequently, cooked as below described. Peanuts and chestnuts are always cooked. A quantity of sand, about the size of No. 2 shot, is heated in an iron pan over a wood fire. The nuts are stirred in the heated sand until sufficiently roasted. The sand, of course, may be used several times for this purpose.

J. J. FREDK. BANDINEL,

NIUCHWANG, *December 31, 1898.*

Vice-Consul.

* This report was prepared at the request of a resident of Michigan, to whom Advance Sheets have been sent.

† The prices given in this report are in United States currency.

FLOODS IN CHINA: APPEAL FOR HELP.

Consul Fowler sends from Chefoo, under date of January 30, 1899, an appeal on behalf of the sufferers from the Yellow River floods. The distress, says Mr. Fowler, is severe, and he hopes the matter will be taken up by the press. The inclosure reads:

AN APPEAL ON BEHALF OF SUFFERERS FROM THE YELLOW RIVER FLOODS IN THE PROVINCE OF SHANTUNG, CHINA.

We the undersigned citizens of the United States residing in Chefoo, China, appeal to the charitable in America and elsewhere, on behalf of the sufferers from the appalling Yellow River flood of this year.

While there is always more or less suffering in this province, owing to the overflow of the Yellow River, which the natives truly describe as "China's Sorrow," probably never before was the distress so great and heartrending as now. The most conservative estimates place the number of starving at 2,000,000, and time and the increasing cold weather will greatly augment the distress.

Daily, almost hourly, we are in receipt of reports from our countrymen in the interior depicting the condition of the famine refugees; hundreds of villages are submerged, cities surrounded by water, homes, furniture, clothing—in fact, everything is under water or destroyed; the natives themselves are living in straw huts; many have absolutely no shelter from the winter's cold and snow, subsisting on bark, willow twigs, roots, etc.

The summer's crops have been a failure, the seed for next spring's sowing is gone, and there is nothing for these starving millions to hope for in the future.

With our knowledge of the terrible want prevailing, we venture to call upon the charitable in our home land to assist us in trying to alleviate at least a portion of this misery.

Therefore, we shall be glad to receive contributions of money and corn. We earnestly beg the merchants and others on the Pacific coast to contribute a steamer load of corn. The natives of Shantung, unlike those down south, subsist upon corn, and we believe that if the grain men of the West will ship to the United States consul at Chefoo, direct from the Pacific slope, a steamer loaded with corn, it will be the means of not only saving thousands of lives, but of opening a market of 25,000,000 to 30,000,000 consumers later on, as under normal conditions American corn can easily compete with native; and if this corn is sent, we guarantee that it will be distributed under the direct and personal supervision of Americans now residing in or near the submerged districts.

We ask for money to be sent to the United States consul here, with which food, clothing, and stock can be bought for the sufferers, and we guarantee a strict accounting for every dollar thus received.

Shantung is peculiarly interesting to American merchants as the best market for their products in all China; to the missionaries, because there are five denominations represented comprising 118 adults, scattered all over this vast province, and to whom we look to assist us in distributing such relief as we may receive.

Probably in no place in the world, and probably not in this generation, has there been so much suffering as is now being endured in Shantung.

The natives are doing all in their power; one firm in Chefoo has contributed the equivalent of \$70,000 in United States gold in cash, and 10,000 bags of corn, and all classes are contributing, but let us not forget that there are 2,000,000 of people starving.

JOHN FOWLER.
L. H. SMITH.
HUNTER CORBETT.
W. O. ELTERICH.
GEORGE CORNWELL.
C. B. DOWNING.

CHEFOO, *January 4, 1899.*

CHINESE DECREE AS TO RAILWAY CONSTRUCTION.

Minister Conger sends from Peking, under date of December 26, 1898, copy of a recent memorial concerning the building and management of railways, distinguishing those that are urgent and those the construction of which may be delayed. The memorial, which has received imperial sanction, reads:

A respectful memorial to the Throne for thorough consideration of the management of railways, and for the purpose of distinguishing between those that are urgent and those that may be delayed. Looking up, we pray for the sacred glance.

It was at first supposed that a speedy construction of main and branch lines of railways would greatly benefit the Government and be a convenience to the people, and that a network of a great many roads penetrating in all directions would be of great advantage. In consideration of the present state of affairs, it is necessary to decide which should have preference in time, and the memorialists request a statement of the course to be pursued.

The Lu-Han and Hankau-Canton lines are the most important trunk lines; next in importance is the Tientsin-Chinkiang line, and Shanhaikuan, and beyond, Moukden, Niuchwang, etc., are strategical points, and roads must be built. With these exceptions, other railways are branch lines. Trunk lines are expensive in construction, and the profits are returned slowly; branch lines cost less, and profits are realized more speedily.

The Government prefers trunk lines, in order that its orders may be speedily transmitted; the merchants, to facilitate trade, prefer branch lines.

The ministers have consulted concerning the building of trunk and branch lines at the same time, and think it would result in confusion; that it would be better to first build the important trunk lines, and, when a good beginning has been made, to proceed with extension.

Again, on examination, Lu-Han, Hankau-Canton trunk lines, and the branch lines of Ningpo, Shanghai, Soochow, Chekiang, Pu-hsiu, Kuang-chiu, and other important trunk lines are all under the direction of Sheng Hsuan Huai. Tientsin-Chinkiang, Shanhaikuan, and the lines beyond have already been, by imperial decree, placed under direction of Hu Chu-fen and others. Tai Yuan to Liu-Lin are under the Shansi Syndicate. Kuang-hsi and Lung-chou are under direction of General Su Yuan-Ch'un. We must request a decree ordering said officials to hasten the completion of the important lines. If the funds are sufficient, the loan, principal

and interest, can be paid, the current expenses met, and, should there be any surplus, it can be used for branch lines. This must be attended with great diligence. After this memorial is presented, all requests to construct branch lines will be refused. This does not refer to agreements already made with different governments. If this meets the imperial consent, the ministers will command that these instructions be followed.

OPENING FOR AMERICAN RAILWAY MATERIALS IN FORMOSA.

The Formosan government has asked for an appropriation of 40,000,000 yen (\$20,000,000 in United States gold) for the construction of a railway through the island and for the improvement of Kelung Harbor. The Japanese cabinet has given its approval, and, as the railway and harbor are urgently needed, it is believed the Diet will pass the bill. There is at present in the island a railway 60 miles long, running from Kelung to Teckcham (Hsinchik). It was commenced in 1887 and completed in 1891. It was owned by the Chinese Government, but, on the taking over of the island by the Japanese, it passed into the possession of the latter Government. The proposed railway will extend south from Teckcham to Takow, a distance of 175 miles.

The Japanese have rebuilt a part of the existing road, but no new rolling stock, with the exception of two or three second-hand locomotives from Japan, has been added. At present, 6 locomotives, 12 passenger cars, and 20 freights and flats are in use. The gauge of the present line is 3 feet 6 inches, and the same will probably be continued in the new road. There will be required steel rails (probably of 60 pounds), locomotives, and bridge material for the line, and one of the leading engineers connected with the work has expressed to me his intention of recommending American locomotives.

I have been urgently requested by Mr. H. Yamashita, Taipeh, Formosa, one of the leading merchants and president of the Taipeh municipality, to place his name before the manufacturers of railway supplies; he especially desires information regarding American locomotives. If any of our manufacturers communicate with him, I would recommend that they give full particulars and lowest terms in the first letter, as there is but little time to lose.

JAMES W. DAVIDSON,
Consul.

TAMSUI, *February 17, 1899.*

TAX ON PETROLEUM AND MATCHES IN JAVA.

In spite of the vigorous protests of the commercial communities in Netherlands India, the internal-revenue tax on petroleum has been raised from 80 cents to \$1 per hectoliter (26.417 gallons). This tax is for all oils, whether native or foreign. In addition, the foreign oils pay a customs duty of 10 cents per hectoliter, which is the same as before.

This new tax goes into effect on the 11th instant. None of the companies, American, Russian, or Sumatran, are prepared to predict the effect on their business by this extra tax; but they admit that they propose to add it to their price to the consumer. So it is safe to say that it may have the effect of diminishing trade somewhat, as the natives are poor and improvident, and never have an extra cent to spare. The chances are that many who now use petroleum will revert to cocoanut oil, which they can make at home very cheaply.

MATCHES.

On the same day—January 11—will go into effect an increased internal-revenue tax on matches, native and foreign alike. The present tax of 16 cents in United States currency per gross (144 boxes) is to be raised to 28 cents per gross.

The duty of 6 per cent ad valorem on foreign matches is left unchanged.

The difference will not be felt for awhile, as heavy importations have been made to anticipate the increased tax.

The one native match factory spoken of in my report of May 26, 1898,* will probably be forced out of business, as it is in very bad shape, and this will be the last straw.

SIDNEY B. EVERETT,
Consul.

BATAVIA, *January 7, 1899.*

TARIFF CHANGES IN NEW SOUTH WALES.

It is claimed that what Americans call the "tariff law" in New South Wales is the most concise and comprehensive tariff law extant, and that Sydney is by far the freest of all the great commercial ports on the globe.

On January 1, 1896, all ad valorem duties were abolished and the

* See CONSULAR REPORTS No. 216 (September, 1898), p. 123.

dutiable list was limited to stimulants and narcotics and twenty-five other articles. On the 30th of June of the same year, the duties on sixteen of the twenty-five ceased; while on the other nine, the duties were to be abolished by a sliding scale before 1900.

The following is the full text of the "permanent tariff" schedule of 1896, in operation from its passage until the recent change of 1898, as fully noted under proper head:

Articles.	Unit.	Rate.	
Spirits:		<i>s. d.</i>	
On all kinds of spirits and spirituous compounds imported and not otherwise enumerated.	Per proof gallon...	14 0	\$3.41
No allowance beyond 16-5 shall be made for the underproof of any spirit of a less strength than 16-5 underproof.			
Case spirits—			
Contents of 2, 3, 4, or 5 gallons shall be charged—			
2 gallons and under as 2 gallons.			
Over 2 gallons and not exceeding 3 as 3 gallons.			
Over 3 gallons and not exceeding 4 as 4 gallons.			
Over 4 gallons and not exceeding 5 as 5 gallons.			
Bitters, essences, fluid extracts, sarsaparilla, tinctures, infusions, and toilet preparations containing—			
Not more than 25 per cent of proof spirit.....	Per gallon.....	3 6	.85
Not more than 50 per cent of proof spirit.....	do.....	7 0	1.70
Not more than 75 per cent of proof spirit.....	do.....	10 6	2.55
If containing more than 75 per cent of proof spirit.....	do.....	14 0	3.41
If containing spirit overproof, to be charged as spirituous compounds.	Per proof gallon...	14 0	3.41
Methylated spirits.....	Per gallon.....	0 1	.02
Perfumed spirits, perfumed waters, Florida water, and bay rum.	Per liquid gallon..	20 0	4.86
Wines:			
Sparkling (for 6 reputed quarts or 12 reputed pints).....		10 0	2.43
Other kinds.....		5 0	1.22
Beer, ale, porter, spruce, or other beer, cider, and perry:			
In wood or jar.....	Per gallon.....	0 6	.12
In bottle.....	do.....	0 9	.18
For 6 reputed quarts or 12 reputed pints.....	do.....	0 9	.18
Tobacco:			
Delivered from ship's side or from a custom-house bond for home consumption, manufactured, unmanufactured, and snuff.	Per pound.....	3 0	.73
Unmanufactured entered to be manufactured in the colony at the time of removal from a customs bond or from an importing ship to any licensed tobacco factory for manufacturing purposes only into tobacco, cigars, and cigarettes.	do.....	1 0	.24
Sheep wash.....	do.....	0 3	.06
Cigars and cigarettes (including wrappers in latter case).....	do.....	6 0	1.46
Opium and any preparations thereof.....	do.....	20 0	4.86
<i>Diminishing duties.</i>			
Candles per pound or reputed package of that weight and so in proportion for any such weight, night lights, and stearin.		0 1	.02
From July 1, 1897.....	Per pound.....	0 0½	.01
From July 1, 1899.....		Free.	
Oil (kerosene, naphtha, and gasoline).....	Per gallon.....	0 6	.12
From July 1, 1896.....	do.....	0 3	.06
From July 1, 1897.....		Free.	
Oils, except linseed oil (raw or boiled).....	Per gallon.....	0 6	.12

Articles.	Unit.	Rate.	
<i>Diminishing duties—Continued.</i>			
Fish and seal oils, black whale, cocoanut, sperm, palm, and essential oils:		<i>s. d.</i>	
From July 1, 1896.....	Per gallon.....	0 6	\$0.12
From July 1, 1897.....	do.....	0 3	.06
Sugar, refined.....	Per cwt.....	6 8	1.63
From July 1, 1897.....	do.....	5 4	1.30
From July 1, 1898.....	do.....	4 0	.98
From July 1, 1899.....	do.....	2 8	.65
From July 1, 1900.....	do.....	1 4	.33
From July 1, 1901.....	do.....	Free.	
Sugar, raw and solid glucose.....	Per cwt.....	5 0	1.22
From July 1, 1897.....	do.....	4 0	.98
From July 1, 1898.....	do.....	3 0	.73
From July 1, 1899.....	do.....	2 0	.49
From July 1, 1900.....	do.....	1 0	.25
From July 1, 1901.....	do.....	Free.	
Molasses and treacle glucose, liquid and sirup.....	Per cwt.....	3 4	.82
From July 1, 1897.....	do.....	2 8	.65
From July 1, 1898.....	do.....	*2 0	.49
From July 1, 1899.....	do.....	1 4	.33
From July 1, 1900.....	do.....	0 8	.16
From July 1, 1901.....	do.....	Free.	
Biscuits.....	Per pound.....	0 1	.02
From July 1, 1898.....	do.....	*0 0½	.01
From July 1, 1900.....	do.....	Free.	
Confectionery (including cakes, comfits, licorice paste, lozenges of all kinds, cocoanut in sugar, sugar candy, succades, and sweetmeats).	Per pound.....	0 2	.04
From July 1, 1898.....	do.....	*0 1	.02
From July 1, 1900.....	do.....	Free.	
Fruits (dried, candied, and prunes, exclusive of dates).....	Per pound.....	0 2	.04
From July 1, 1898.....	do.....	*0 1	.02
From July 1, 1900.....	do.....	Free.	
Jams and jellies, per pound reputed package of that weight and so in proportion for any such weight.	Per pound.....	0 1	.02
From July 1, 1898.....	do.....	*0 0½	.01
From July 1, 1900.....	do.....	Free.	
Preserves and canned fruits (boiled, peeled, drained, or dried)...	Per pound.....	0 1	.02
From July 1, 1898.....	do.....	*0 0½	.01
From July 1, 1900.....	do.....	Free.	

NOTE.—The * indicates the present duty, as retained by paragraph 3 of law of 1898.

REVISED TARIFF LAW OF 1898.

Owing to an insufficient revenue to meet a necessarily increased expenditure, there was a revision of the tariff by the last parliament, the act going into operation from its passage—November 3, 1898.

The total schedule of the new duties is as follows:

Tea	per pound...	1=	\$0.02
Fruits (dried, candied, or prunes, exclusive of dates), in lieu of the duty of 1d. per pound now chargeable.....	per pound...	2=	.04

The following three paragraphs cover the entire changes, other than the new schedule last above quoted.

(1) The import duties of customs mentioned in the schedule to this act shall be levied and collected upon all goods therein mentioned on their importation and

upon all such goods in bond: Provided that all goods imported for the supply of Her Majesty's service shall be exempt from such import duties.

(2) All contracts made on or before the 3d day of November, 1898, for the sale or delivery otherwise than in bond of any goods the duty on which is newly imposed or is increased by this act, shall be subject to an increase in the contract price of such goods corresponding in rate and amount with the duty so imposed or with such increase of duty, as the case may be.

(3) The duties of customs imposed by the customs duties act of 1895 on sugar, raw and refined, and glucose, solid, upon molasses and treacle, glucose, liquid and sirup, upon biscuits, confectionery (including cakes, comfits, licorice, and sweetmeats), jams and jellies, preserves and canned fruits, boiled, peel drained or dry, shall cease to be diminishing duties and shall be collected, levied, and paid as part of the permanent customs tariff at the rates in force at the commencement of this act.

It will be observed in the third paragraph that the duties in the 1896 act, proposed to be removed by the sliding scale, are retained at the rate in force at the date of the later act. (November 3, 1898).

GEO. W. BELL,

SYDNEY, *January 3, 1899.*

Consul.

UNITED STATES TRADE WITH SYDNEY.

Commercially, Sydney may be considered as representing New South Wales; it is more, for it is the chief distributing point of the continent of Australia. In the value of its tonnage, Sydney is yet, I think, the tenth commercial port of the globe, and by reason of increasing acquaintance and mutual confidence, the commercial relations of the United States with Australia are becoming more firmly established and the reciprocal trade more extensive and profitable.

GENERAL TRADE.

The following table gives the total value, in round numbers, of export and import trade of Sydney with all countries; also with the three leading foreign competitors—United States, France, and Germany—for the five years from 1894 to 1898, inclusive:

Country.	1894.	1895.	1896.	1897.	1898.
Total.....	\$176,890,000	\$184,440,000	\$211,960,000	\$221,310,000	\$183,370,000
France.....	5,409,000	7,340,000	7,830,000	8,510,000	9,290,000
Germany.....	6,220,000	7,680,000	7,200,000	8,700,000	9,340,000
United States*.....	3,940,000	5,830,000	6,850,000	8,460,000	18,990,000

* The export of gold to, and the import of wheat from, the United States being really abnormal, these commodities are deducted, leaving only in our calculations our regular staple trade.

† Owing to a combination of circumstances, our people bought from New South Wales during the year 1898 but 4,000 bales of wool, while for the preceding year we bought 12,000 bales. Had we bought from New South Wales as much wool in 1898 as in 1897, our total trade with the colony for the last year would have exceeded that of Germany.

WHEAT AND FLOUR.

Until recently, New South Wales had not produced sufficient grain for her own consumption; in 1896, there was imported from the United States some \$3,450,000 worth of wheat and flour, and in 1897, \$2,584,000 worth. But, owing to the passage of more liberal land laws and the greater encouragement given to agricultural pursuits, the wheat acreage has been so largely increased that it is not improbable that the colony may soon to some extent be in the export market.

Several new lines have been successfully introduced into this colony during the last year, and the old prejudices are nearing the vanishing point. "American goods" no longer mean "Yankee notions" or handy devices or ornamental novelties alone, but they mean also nearly every modern machine or appliance from a sharp tool to the best structural steel for railway, bridge, or building purposes.

Our manufacturers have been learning rapidly during the last few years, and the complaints of poor packing, failure to keep up to sample, and defective goods are becoming rare. However, I want to impress our people again with the wisdom of deviating, in many ways, from the methods which win success in our own country. They should remember that there is strong competition here; that it costs a great deal to return goods; and that it is often difficult for strangers to ascertain the business reliability of persons or firms willing to handle the goods.

The experience of every passing month confirms my opinion that special lines should be handled by special agents on the ground, and that staples should be handled through well-known and firmly established commission houses. I know of American articles the agencies of which have been secured by firms, seemingly for the very purpose of keeping them from competing with goods of like character; and I also know of firms that have lost heavily by trying to "deal direct," with a view of saving the usual commission-house charge.

Losses through business with the well-established commission houses are very rare, while losses from efforts to deal direct with strangers halfway around the world, while certainly not frequent, are not unusual, and when they do come, they wreck much of the good will and confidence that wiser methods have established.

GEO. W. BELL,
Consul.

SYDNEY, *January 16, 1899.*

COMMERCIAL TRAVELERS IN KOREA.*

Korea should ordinarily be avoided during the months of July and August, when the excessive rains flood the country and make travel very difficult and disagreeable.

English and Japanese are the languages most needed. English is usually ample for all purposes.

During June, July, and August, the lightest clothing is worn. White duck suits are the common dress of foreigners. For April, May, September, and October, which are delightful months in Korea, ordinary-weight clothing, with good woolen underwear for the cold nights, is best. During the latter part of November, as well as during December, January, and February, the very heaviest clothing is essential. Many people wear thick sweaters for undershirts during the coldest weather. The winters are usually dry, cold, and clear, and, with warm clothing, the climate is delightful.

Commercial travelers should carry United States passports for purposes of identification; these are visaed in case of a trip to the interior. Passports are not needed for the ports or within an area of 34 miles therefrom, which includes the capital, Seoul.

Travelers are subject to no tax in Korea, and personal luggage is not dutiable at the customs. Luggage of Americans is seldom even examined.

Hotel accommodation at present leaves much to be desired. At Chemulpo, there are two comfortable hotels. One is kept by Japanese—Hotel Daibutsu—a three-story brick house with a good view, clean rooms, and fair beds, but indifferent table. The other—Steward's Hotel—is owned and conducted by English-speaking Chinese, and has the reputation of serving better food than the first, though the rooms and beds are said not to be so good. Seoul has a purely Japanese hotel, where foreign food is served, if desired. The beds are in the Japanese style—on the clean matted floor. Hotel Bijno, Seoul, is a stopping place in the foreign quarter, where four rooms over a dining room and provision store afford all the comfort that an accommodating Italian and his wife can furnish. Prices at all these stopping places are at present 4 yen (\$2 gold) per day. Travel in Seoul is by jinrikisha, electric railroad, and sedan chair. To and from Chemulpo, it is by chair, pony, jinrikisha, or boat. A railroad will soon be completed connecting the two places, after which it is supposed that better hotel accommodations will be provided.

I do not think a four weeks' stay in Seoul or Chemulpo should

* This report was made in answer to inquiries by the director of the Philadelphia Museums, to whom Advance Sheets have been forwarded.

cost over \$100 gold, exclusive of the purchase of curios and personal effects.

The Hongkong and Shanghai Banking Corporation has an agency in Chemulpo, as also in several places in America, notably New York and San Francisco. Japanese banks are to be found in Seoul and Korean ports. Japanese notes are freely current in Korea. American money might be difficult to exchange.

In reply to the question as to whether a drawback is allowed on the withdrawal of samples from the country, I would say there would be no difficulty in securing such a drawback, if the samples were of so extensive a nature as to fail to pass as passengers' luggage.

I would not recommend a journey from the United States to visit Korea as a commercial traveler without especial inducement. However, as the steamers from Japan to North China stop usually for twenty-four hours at Chemulpo, a commercial traveler could very well see the principal importers during that time and be able to judge for himself whether it would be wise to stop over a steamer (say a fortnight) or not.

As to the opening for American goods, I should say that cotton and cotton manufactures would be the most promising line, since the whole population of 8,000,000 to 12,000,000 dress in cotton cloth, which is padded with cotton in the winter. They raise little cotton, and every individual probably wears at least one garment that is made of imported cotton sheeting. The Koreans are fond of watches and clocks. Needles, thread, matches, dyes, etc., are all imported. Knives made to suit Korean uses should find a market here, as should cheap low shoes and socks. Tinned milk, butter, and provisions are in steadily increasing demand. Farmers, in some districts, are said to be inquiring for the simplest agricultural implements of American manufacture; but something in the way of a revolution in customs must take place before foreign agricultural implements will be used in Korea to any great extent.

Korea is an agricultural country. Rice and beans are the chief crops and form the heaviest items of export. Manufacturing is done crudely by hand, and the articles of native manufacture are exceedingly expensive, so that foreign-made articles usually have an easy entrance, if they are in demand and appeal to the natives. When the crops are good and the export is heavy, buying is free; the contrary is the case when the crops are short. The absence of native banks and the liability to lose money by extortion tempts the common man who has a little money to spend it and get the benefit of it before it is lost. They are therefore free buyers, when they have the money.

HORACE N. ALLEN,
Consul-General.

SEOUL, *January 23, 1899.*

COMMERCIAL TRAVELERS IN ADEN.

Consul Cunningham sends the following from Aden, under date of January 20, 1899:*

Commercial travelers would find it best to come to Aden in the winter season, from about the 1st of October to the last of April. During these months, they would find the climate good, and, from what I am told, they would get the best result from a trip at this season of the year. If any preference is to be given these months, it would be best to come during February or March.

As to the language, a traveler ought to be able to speak either Arabic or Hindustani in addition to English. He might be able to get along in a half-satisfactory way with English alone, as shops which seek the European trade usually have someone in them who speaks English; but certainly, a man with a knowledge of one of the foreign languages (Arabic is preferable) would have an immense advantage.

During the months named, the clothing worn by Europeans here is a flannel suit for the day, and in the evening something slightly heavier, similar to a light tweed suit at home. It is advisable that a person should also wear some light woolen underwear, the more so if he is not accustomed to the cold winds which are liable to arise here at any time in the day. It is imperative that he should provide himself with a good sun hat, or "topi."

No passport of any kind is required here, and he need carry no papers except such as are necessary to establish his identity. A commercial traveler is not subject to any special tax at Aden.

The hotel accommodations are very poor; there are three, and there is little choice between them. They are conducted somewhat on the American plan. The expense of such accommodations as are afforded by them would be from 42 to 50 rupees (\$13.44 to \$16) per week, and no reduction for longer stay. The other expenses would not be great; coolie and servant hire would be from 1 to 1½ rupees (32 to 48 cents) per day each. If occasion arises (as is frequently the case) to use a native broker, he would only demand his brokerage commission. When it is necessary to use a carriage (there are no tram cars), it will cost 4 rupees (\$1.28) per day. Other incidentals, as wines, liquors, cigars, and the like, would not be more expensive than in the United States.

* This report was made in answer to inquiries by the director of the Philadelphia Museum, to whom Advance Sheets have been forwarded.

There seems to be no established rule for the admission of samples as distinguished from other merchandise; but, as this is practically a free port, it is not an important matter. Duty is imposed only on liquors, cigars, manufactured tobacco, firearms, and ammunition.

If a traveler has no local connection, he should provide himself with English sovereigns or American \$5 gold pieces (sovereigns are the best). Bank notes should never be carried, but drafts or letters of credit, payable at the National Bank of India, are good, provided identification can be furnished here.

I would strongly recommend that all commercial travelers be able to quote prices in English pounds sterling.

In the above estimate, I have used the rupee, it being the coin in general use here, and in the reductions to United States gold its value has been taken at 32 cents. It will vary some, but probably not more than 1 cent up or 4 cents down.

DIRECT STEAMSHIP SERVICE WITH TURKEY.

In my report* on the commerce and industries of Turkey, I endeavored to convince the business men of the United States that a direct steamship line was indispensable to the growth of American commerce in Turkey, and that, by combining orders, such a line would have all the freight it could carry.

After long negotiation with many steamship companies, Messrs. Barber & Co., of New York, have been induced to start a direct line. The first steamer—the *Athalie*—has come with 15,000 bags of American flour and gone with a good share of Constantinople, Smyrna, and Grecian freight. The *Britannic* and *Cape Comorin*, of this line, are already on their way, loaded with American machinery, oil, and other goods. The *Stalheim* will sail for this port the last of February.

If American exporters will give this new line their business for Mediterranean ports, it will soon be a permanent success and open excellent markets for American goods in Turkey, Bulgaria, Roumania, and southern Russia. The new line will need American patronage, for the Cunard and three other companies carrying freight to the United States by transshipment at Liverpool have already combined, and orders have come from Liverpool to make any cut in rates that may be necessary "to kill the Yankee line."

The opinion here is unanimous that if direct communication can

*See CONSULAR REPORTS No. 222 (March, 1899), p. 401. Mr. Dickinson's report will appear in full in the forthcoming Commercial Relations, Vol. II.

be maintained, American merchants and manufacturers will soon have a substantial share of the business of this region. The manager of the largest department store in this city says:

If the Americans get a direct line of steamers to these ports, the German drummer may as well pack up his samples and leave the country.

The *Athalie* discharged her freight hardly ten days ago, and already American flour sells at a higher price than any other in this market. It is the talk of the town. Fully 80 per cent of the bakers and consumers are asking for it, and this consulate-general has been visited by several of the leading flour dealers, who are anxious to purchase or secure the agency for American flour. The local millers have reduced their price for grinding 50 per cent, in order to meet the new competition; but they can not succeed, for they have neither the clean, assorted wheat nor the improved machinery with which to equal the American product. But they do not propose to have the market cut from under them without a struggle. The custom-house officials have been led to believe that the whole population would be poisoned, if they should eat bread made of American flour; so they rejected as "deleterious to health" 991 bags of the 15,000 brought on the *Athalie*.

This same action, however, had been taken two months ago, when a sample lot of flour was brought in, and the United States minister had obtained, in the meantime, a general order from the Porte, fixing the minimum of dry gluten in imported flour at 9 per cent and providing that a chemist selected by the consul of the country to which the owners of the flour belong should be present at the inspection. The result, therefore, of the condemnation of the 991 bags without my delegate being present was an order from the Grand Vizier to deliver the flour and let the chemical analysis take place afterward. The flour has been delivered, and, as it is from a famous Minnesota firm and is certified to contain 14 per cent of dry gluten, we have no doubt as to what the analysis will show.

CHAS. M. DICKINSON,
CONSTANTINOPLE, *February 15, 1899.* *Consul-General.*

JUTE CULTURE AND JUTE INDUSTRIES IN INDIA.

At the request of parties in the United States interested in jute manufacturing, the following report* is made, which may be of general interest to those in that business:

The number of tons of jute grown annually in the last five years was about 1,070,000. The quantity consumed in India in the manufacture of gunny bags and burlaps during the last five years was about 410,000 tons annually. The quantity exported to the United States and other countries was about 554,000 tons annually. The planting is entirely done by small growers, and there are no large planters of jute. Growing is confined almost entirely to Bengal and parts of Assam.

There are thirty-three jute mills, all in Bengal. With one exception, they are owned and operated by foreign capital. The nominal capital—figures incomplete—is about \$15,000,000. The number of persons employed is 88,222. The average wages paid in the mills is $1\frac{1}{4}$ to $4\frac{1}{2}$ rupees (40 cents to \$1.44) per week.†

The quantity of gunny bags and cloth exported to the United States and other countries during the last three years is shown below:

To—	1896.	1897.	1898.
	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>
New York.....	55,000,000	77,500,000	136,500,000
San Francisco.....	6,750,000	50,000,000	35,000,000
South America.....	64,500,000	116,500,000	82,750,000
Other countries.....	21,500,000	27,500,000	28,000,000
Total.....	147,750,000	271,500,000	282,500,000

It will be seen by the above figures that about 60 per cent of the jute manufactures goes to the United States in the form of gunny bags and burlaps. The approximate value of exports of raw jute and bags and burlaps in 1897-98 to the United States and other countries was \$50,000,000. The average value was: In 1896, $9\frac{1}{4}$ rupees (\$2.96); 1897, $8\frac{1}{2}$ rupees (\$2.72); 1898, 8 rupees (\$2.56)—per 100 yards. The annual increase in mills the last ten years has been 30 to 40 per cent.

Practically, no stocks of manufactures are kept on hand, as the goods, as a rule, are sold before manufactured; sometimes, a year or more in advance.

* Advance Sheets have been sent the correspondent.

† The consul values the rupee at 32 cents.

The expansion in the trade in gunny cloths is remarkable. In five years, the value of exports has increased from \$1,750,000 to \$6,700,000, and last year it represented 31.6 per cent of the jute manufactures. The exports of gunny bags have increased in the same period from \$8,900,000 to \$11,600,000. The noticeable advance in last year's exports may be attributed to the larger amount of machinery at work in India, the cheapness of raw jute, and the fall in the price of manufactures.

R. F. PATTERSON,

CALCUTTA, *January 10, 1899.*

Consul-General.

DREDGE FOR RUSSIAN CANALS.

At Seraing, a city of about 35,000 inhabitants, on the Meuse River, 5 miles above Liege, are located the extensive works of the Société John Cockerill, founded by John Cockerill, of England, in the year 1825. During 1898, there were employed in these works 9,849 workmen, and the engines in use had an indicated horsepower of 23,000. The company has a capital of \$13,000,000, and is one of the largest of the kind in Europe. The greater portion of the coal consumed in the works is mined on the premises from three separate mines, which produced during 1898 more than 260,000 tons. During 1898, the works consumed 300,000 tons of iron ore, which in the main came from Bilbao, Spain, and 220,000 tons of pig iron.

Among the most important productions of this company for 1898 was one of the two immense dredges that are being constructed for the Russian Government at a total cost of 2,900,000 francs (\$559,700). The one just completed is called the *Volga*, since it is to be used by the Russian Government in digging the extensive ship canal to connect the Baltic Sea with the Volga River, which is one of the greatest engineering projects now under consideration on this continent, involving the deepening and widening of the Volga its entire length.

The dredge is constructed on the principle of the dredge *Beta*, in use in the Mississippi, but is very much larger, being able to remove 4,000 cubic yards of sand, gravel, clay, or similar material per hour to a distance of 700 feet. The earth is cut up and mixed with water by revolving trepans, until it is of a consistency that can readily be forced up by two powerful steam pumps of 1,428 horsepower each.

The dredge has an electrical plant, to provide light and to run several small motors for the more delicate parts of the machinery.

The dredge is 214 feet 6 inches long, 61 feet 6 inches wide, and, when ready for work, draws 4 feet 6 inches of water. It can excavate

a channel nearly 80 feet wide and 14 feet deep at one cutting. The fuel used is naphtha, and when the dredge is in full blast it consumes about 1,200 gallons per hour. Tanks are provided that hold sufficient fuel to run the dredge at full pressure for twenty-four hours. When in full operation, it will give employment to 36 men, as follows: Stewards, 6; engineers, 12; and laborers, 18.

The dredge will be given a trial on the River Scheldt, near Antwerp, Belgium, beginning about March 1, 1899. From there, it will be towed to the vicinity of St. Petersburg, where it will begin its work.

ALFRED A. WINSLOW,
Consul.

LIEGE, *February 9, 1899.*

HARVEST OF CEREALS IN EUROPEAN RUSSIA IN 1898.

An official report, giving the data concerning the harvest of cereals in European Russia for 1898, as compared with 1897, exclusive of the Caucasus and Poland, which has just been made public, includes all the cereals and shows an average of about 40 poods per dessiatine (53 pounds per acre). Last year, the harvest amounted to 35 poods per dessiatine (47 pounds per acre). The harvest for 1898 was better than that for 1897 for winter cereals by 17 per cent; spring cereals, 14 per cent; and cereals in general, by 14 per cent.

In the governments of Vologda, Kostroma, Saratov, Simbirsk, Viatka, Kazan, Perm, Samara, and Ufa, the crop amounted to less than half of that of 1897. In three governments—viz, Nizhni Novgorod, Penza, and St. Petersburg—the yield was equal to that of 1897, and in the remaining thirty-eight governments, better than in 1897.

In the various districts of the fifty governments, the harvest was as follows:

Description.	1898.	1897.
Bad	42	43
Unsatisfactory and middling	189	278
Satisfactory	268	178
Total	499	499

In 1898, there was a bad harvest, yielding 20 poods per dessiatine (27 pounds per acre) in 15 per cent of the total area; in 1897, 31 per cent; a middling crop in 1898, 36 per cent; in 1897, 37 per cent;

a good crop in 1898, 49 per cent of the area; and in 1897, only 32 per cent.

This year's harvest was not uniform. In the greater part of the black-earth belt, and in many governments of the nonblack-earth region, in the same district and even sometimes on one and the same farm by the side of a good crop were found unsatisfactory and even bad crops. This variety is attributed to an unequal distribution of the atmospheric deposits, to topographic conditions, to noxious insects, and similar reasons. The yield of cereals in European Russia is classed as "middling." The harvest of spring and winter cereals in the large region covering the Kazan, Samara, Viatka, Simbirsk, Ufa, and in the greater parts of the Saratov, Orenburg, Nizhni Novgorod governments, the eastern districts of the Penza government, the western and southwestern districts of the Perm government, the northern parts of the Don region, and some districts of the Tula, Vladimir, and Kostroma governments, was bad.

In other parts of the Empire, the yield of cereals, especially rye, was satisfactory; and in the southwestern, some of the Lithuanian, White Russian, and Vistula governments the crops were very good.

Winter-wheat crop was good in all localities where the rye was good, but unsatisfactory in the central governments and the Don region, and in the remaining localities the crop was "above middling."

The spring cereals—oats, barley, spring wheat, millet, and maize—gave on the average a satisfactory crop. The pease and buckwheat crop was above middling.

In regions where the crop of spring cereals was bad and unsatisfactory, the yield was less than in the region of winter cereals where similar conditions prevailed. This includes the central Volga region, Samara, and Urals, as well as the governments of Tambov, Riazan, Tula (where the oats and barley crop was unsatisfactory), Vladimir, Kostroma, and some of the districts of Vologda. On the remaining area of European Russia, the spring cereals gave a satisfactory crop, and in many of the Novorossisk, Little Russia, southwestern, White Russian, Lithuanian, and Vistula governments the harvest was "above middling."

The sunflower crop was satisfactory in the southwestern and Little Russian governments; but in the remaining area where it is cultivated, the yield was unsatisfactory.

The potato harvest was unsatisfactory and bad in the central agricultural and central Volga governments, middling in the black-earth governments, and satisfactory and even good in the nonblack-earth governments.

Owing to dry weather, the harvest of vegetables was hardly sat-

isfactory. The crop of cucumbers was everywhere good at the beginning of summer, but later on, owing to the lack of rain and the heat, they perished. The cabbage suffered greatly from heat and noxious insects, yielding an unsatisfactory crop. Watermelons were abundant, but small.

The following table shows the harvest of cereals in 1898:

Government.	Rye.	Winter wheat.	Spring wheat.	Oats	Barley.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Central agricultural.....	3,554,758	162,451	288,048	1,448,387	178,613
Central Volga.....	2,626,161	4,226	389,629	645,306	33,758
Lower Volga.....	255,081	677	969,120	268,000	49,516
Novorossisk.....	990,661	901,258	3,803,790	690,806	3,228,209
Southwestern.....	1,363,743	83,820	97,258	1,147,323	514,613
Little Russian.....	1,370,032	138,822	901,145	619,145	645,887
Industrial.....	1,639,387	2,097	29,032	940,564	145,000
White Russian.....	1,434,210	27,806	25,564	768,694	297,177
Ural.....	1,214,507	.....	376,209	979,355	215,484
Northern.....	218,000	.....	15,403	149,113	83,306
Lake.....	651,548	.....	.....	465,565	120,081
Lithuanian.....	981,726	76,613	12,177	462,097	237,823
Baltic.....	470,032	41,129	10,645	337,581	331,774
Total.....	16,769,936	1,438,899	6,918,029	8,922,307	6,081,241

Government.	Buck-wheat.	Millet	Maize.	Pease.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Central agricultural.....	261,532	644,967	.....	39,225
Central Volga.....	78,339	227,758	.....	66,774
Lower Volga.....	8,548	57,258	.....	11,613
Novorossisk.....	13,419	186,113	819,758	9,758
Southwestern.....	239,048	234,758	289,679	101,855
Little Russian.....	230,871	174,677	5,484	30,726
Industrial.....	23,597	.....	.....	36,290
White Russian.....	93,951	.....	.....	62,419
Ural.....	15,565	.....	.....	29,113
Northern.....	.....	.....	.....	8,871
Lake.....	.....	.....	.....	24,466
Lithuanian.....	33,629	.....	.....	65,887
Baltic.....	2,016	.....	.....	31,855
Total.....	1,000,515	1,525,531	1,114,919	518,854

W. R. HOLLOWAY,
Consul-General.

ST. PETERSBURG, *January 31, 1899.*

BRITISH NATIONAL GRAIN STORES.

From time to time, the question of national provision for emergencies in regard to the food supplies commands some degree of attention; and there are not a few economists who predict that some day a scheme will evolve itself that will command the approval of the legislature, and consequently assume a tangible form, in the storage of immense quantities of grain which under ordinary circumstances can not be depleted, but in times of need will be available for general distribution throughout this country. It is naturally a sore point that to a great extent the United Kingdom is at the mercy of other countries in the matter of grain supplies; and so long as these supplies are imported more cheaply than they can be grown here, the alarmists will persist in urging the need of ample provision being made by the nation for all emergencies. And thus the wars and rumors of wars in recent times have served to accentuate the desirability of such provision, and have produced the usual effect of a recurrence of agitations in various parts of the island for the establishment of national granaries.

All sorts of schemes—most of them chimerical in the extreme—have been suggested, not one of which, however, appears to have found much favor. Hitherto, no practical plan has been elaborated, beyond the general idea of imitating the example of Joseph of Biblical history in anticipating the days of famine by the filling of vast storehouses with grain. The more popular scheme appears to be in the direction of increasing the number of ironclads for the protection of the British mercantile marine on the high seas. However, it is by no means a small class who urge that, costly though it may prove, it is the duty of the Government to protect the nation from the panic prices which would, as a matter of course, be incidental to wars between this and any other important power, whereby the great merchant fleet of this country might possibly be hampered in the importation of the necessary supplies; and there is every probability, whatever the outcome may be, that the question of national granaries will be pushed to the front. The economic problem in itself may never be satisfactorily solved, but will always provide abundant food for discussion, as may be seen from the report I append of a paper on the subject read at the annual meeting of the Monmouthshire Chamber of Agriculture in the present week by a Cardiff gentleman, Mr. J. H. Mullins, a director of one of the leading grain and flour firms in this country. Mr. Mullins has evidently devoted a great deal of attention to the study of the subject, and his paper will doubtless attract

criticism—not altogether unfriendly—because he has outlined a definite scheme.

The review of the report, which appears in the *Western Mail*, January 17, 1899, reads as follows:

Personally, he said, he would favor some scheme whereby farmers would be enabled to grow more wheat at a profit to themselves; but as this must necessarily savor of protection, he feared it was outside the scope of practical politics for the time being. Setting this on one side, it was undoubtedly the case that a number of persons had come to the conclusion that the small stock of grain held in this country constituted a source of great danger, and they were therefore agitating for the erection of vast stores at certain points to be filled with foreign grain for use in case of war. Whether this plan was a good one or not, it certainly had the great advantage of being defensive, and not offensive, and if carried out, would enable the country and the Government to act more freely when relieved of all fear of famine and misery at home. Most objectors to the scheme averred that as we had the greatest navy in the world, we could easily protect our merchant vessels in case of war, and that therefore our food supply would not be interfered with to any great extent. But every ship withdrawn to protect merchantmen would reduce our superiority and lessen our powers of attack. Taking, for instance, a war with France and Russia combined against us, we should then have to rely principally upon America for our supply, and it would be possible for the Americans, by utilizing the option markets in New York and Chicago, to buy in one day sufficient grain to paralyze the American export trade. The proposal which seemed to be most favored was the erection of enormous warehouses on the latest plan of "silos," which would be under the control of Government officials, who would periodically sell and replace, for it would be quite impossible to keep the wheat good beyond a certain time. To his mind, this would be unworkable and fearfully expensive, as well as likely to upset the corn trade for some considerable time. The warehouses would cost an enormous amount to build, and the buying and selling would almost certainly be attended with heavy loss. Another proposal he had heard was that the Government should contract with large merchants and millers to keep a certain stock always in store; but this, he thought, would be risky and expensive, for the merchant would not keep a heavy stock in store unless he were paid a good interest for his money and a good price for his storage. Mr. Mullins then came to his plan, which was that the Government should appoint agents at the different ports in the United Kingdom, selecting them from among the merchants and millers who were actually engaged in the corn trade. They should be men of standing, able to provide good security. Having appointed these agents, the Government should proceed gradually to buy cargoes afloat through them, in single cargoes and small quantities, so as not to upset the trade. When bought, the wheat should be stored in the hands of independent warehouse owners or dock companies of standing under warrants, which warrants would be paid for and held for the Government by the agents of the Bank of England. The agents would be bound by their engagement to use or sell a certain proportion of this grain in store, in such quantities as should insure the gradual and continuous delivery of the old and storage of the new wheat, so that the grain in store might be always in first-class condition. Warrants for the old wheat would be delivered to the agent in exchange for warrants for wheat ex-ship, so that as he imported cargoes for his own use he could deliver them over to the warehouseman in exchange for fresh warrants, which could be handed to the bank. Some had raised the objection that the agent would induce the Government to buy wheat of a very superior quality in the first place, and that he would then buy inferior qualities to supplant it with;

but Mr. Mullins saw no risk in this, because if the agreement with the agent necessitated his moving all wheat from store in a given time, he must of necessity come to his own poor quality, say, within twelve months, and therefore it would be to his interest to import such quality as suited him either for his own use or for sale. By adopting this plan, a number of warehouses would come into use which at present were of little value, owing to our present system of storing on the water. It was probable that others would have to be built; but this could be left to private enterprise, and the rent he would suggest—1d. per quarter per month—would leave a fair profit to the warehouse owner. The interest on capital and working in and out of store, he calculated, would come to 1s. per quarter per annum, or, say, 2s. per annum in all. This would mean £1,000,000 per annum to secure a reserve of 10,000,000 quarters of wheat, and he questioned if any cheaper mode of insuring such a reserve could be advocated. It would prevent frantic speculation without any basis, which would inevitably follow the event of war being declared if such a reserve did not exist.

DANIEL T. PHILLIPS,

CARDIFF, *January 20, 1899.*

Consul.

AGRICULTURE IN SWEDEN.

There are in the Kingdom of Sweden 325,446 farmers, or persons engaged in agricultural pursuits, of which number 276,664 are their own masters, work their own lands, or engage help; and 48,802 are tenants and rent or work on shares with the owners of the soil.

There is a special class of farm laborers in the Kingdom who are given so many acres of land for their own use, in consideration of so many days' labor during the year for the owner of the farm. These "torpares" are a sort of fixture to an estate, and their like exists in no other country. Their movements, however, are not controlled, and a "torpare" can leave the "jordtorp" at the expiration of his contract. Of these tenants, there are 169,739.

The land in the Kingdom is composed of 35,954 hectares (88,842 acres) of so-called brushwood, 3,453,353 hectares (8,533,235 acres) of tilled land, 1,485,552 hectares (3,670,799 acres) of pasture land, and 18,581,121 hectares (45,913,950 acres) of timber land.

Harvest of the Kingdom, 1897.

Crop.	Quantity.	
	<i>Hectoliters.</i>	<i>Bushels.</i>
Wheat	1,648,370	4,678,074
Rye	8,100,981	22,990,584
Barley	4,820,281	13,679,957
Oats	19,088,090	54,171,999
Mixed grains.....	3,120,340	8,865,525
Pease	438,799	1,245,312
Beans	62,744	178,067
Potatoes	18,517,576	52,552,881
	<i>Tons.</i>	
Sugar beets.....	730,174	.....

The animals in the Kingdom in 1897 were:

Animals.	Number.	Compared with 1896.	
		Increase.	Decrease.
		<i>Per cent.</i>	<i>Per cent.</i>
Horses over 3 years.....	443,377		0.52
Horses under 3 years.....	731,432	0.28	
Oxen.....	232,656		1.94
Milch cows.....	1,725,355	0.34	
Calves and heifers.....	537,728		0.77
Sheep.....	1,296,800		0.14
Goats.....	76,564	4.24	
Hogs.....	802,859	1.78	

WAGES.

The prices paid farm laborers varied in different parts of the Kingdom. The average may be stated to be about 180 Swedish crowns (\$48.24) a year. In some localities, the pay is as high as 280 crowns (\$75.04) a year; while in other places as low as 160 crowns (\$42.88) a year. Boys can earn 96 crowns (\$25.73) a year. During the harvesting season, when extra help may be needed, the pay for men averages 1.92 crowns (51 cents) and for women 1.07 crowns (29 cents) a day. The condition of the laboring classes is much improved, and good help is scarce.

EDWARD D. WINSLOW,

STOCKHOLM, *January 2, 1899.*

Consul-General.

THE USES OF PEAT MOSS IN EUROPE.

In compliance with the request of a New York manufacturer, a Department instruction was sent on September 22, 1898, to certain consular officers in Germany, France, and the Netherlands, asking for information in regard to the uses of moss, especially in the manufacture of paper. The replies received* are as follows:

NETHERLANDS.

Consul Listoe, of Rotterdam, on November 7, 1898, sends copy of a letter from the Griendtsveen Moss Litter Company, Limited, the largest dealer in and exporter of peat moss in the Netherlands, as follows:

Moss litter, peat dust, and peat fiber are made from peat. Moss litter is used for bedding of horses and cattle. Peat dust is used for disinfecting purposes—that is to say, by mixing it with manure the moisture of the latter is absorbed and there is no unpleasant smell. Further, it is used for packing material for fruit and is shipped for that purpose to Las Palmas and the Canary Islands.

* Advance Sheets have been sent the correspondent.

Peat dust is also mixed with molasses and used in this form as fodder for cattle. This is mostly made in Germany, and the sales of this molasses fodder are daily increasing. Peat dust is sifted from moss litter.

We have seen many samples of compressed articles made from peat, but there is nothing of the kind made in the Netherlands. The samples which we have seen came from Germany, but they were mostly experiments of inventors.

Peat fiber is used in Holland by Messrs. V. Morris & Co., in Weert. They make horse cloths and carpets and also antiseptic wool for dressing horses.

A few years ago, there were erected at Maasstricht works for making "berandine," or peat wool. The enterprise was not, however, a success.

No paper from peat moss is manufactured in Holland. Some time ago, we had an offer from an Austrian firm to purchase a patent for manufacturing paper from peat, but the results from our experiments were not at all satisfactory, and our technical adviser considered the patent worthless. We are now pretty sure that the construction of the cells of peat is such that it is not fit material for making paper.

Consul Corey transmits from Amsterdam, under date of October 14, 1898, a letter from W. A. Scholten, of Groningen, a prominent peat-moss manufacturer, to the effect that he intends to patent a process for the manufacture of paper from peat moss.

GERMANY.

Under date of October 5, 1898, Consul-General Mason, of Frankfurt, says:

There is no native peat, and, so far as can be ascertained, no manufacture of paper or other article from peat moss in or near the consular district of Frankfurt.

I can find no one here who has any definite knowledge of paper manufactured from peat moss. The nearest approach to such an article that I can discover is a wadding, or felt, made in sheets from moss and used for external applications in medicine and surgery. It is made by H. Marwede, at Neustadt-on-the-Rübenberge, in the consular district of Hanover. Another product of turf fiber, known as "Torf-Brett" (turf board), is likewise manufactured at Hanover.

Still another product—moss soles for shoes and slippers—is made by Mr. C. Beckstroem, at Neu-Strelitz, in the consular district of Berlin; but I have not been able to obtain a sample of such goods at Frankfurt.

FRANCE.

Consul Thackara, of Havre, under date of October 27, 1898, writes that, after thorough investigation, he finds that there are no manufacturing factories in that consular district in which peat moss is used for paper-making purposes.

PRICES OF PROVISIONS IN PRUSSIA.

There is a widespread belief that living is much cheaper in Germany than in the United States. The fact is that, generally speaking, labor and rents cost less over here than they do at home; but most of the articles of food supplied by the farmer and grocer and butcher take more money to buy than they do in the United States, as may be seen from the following list of prices which prevailed in this country during the years from 1896 to 1898:

Average prices of provisions in the Prussian Monarchy (with the exception of Trier).

Articles.	1897.	1898.	1896-97.	1897-98.
Wheat.....per 2,204 pounds...	\$39.03	\$43.08	\$26.89	\$44.98
Rye.....do.....	29.51	34.03	30.08	33.80
Barley.....do.....	31.42	35.22	30.70	34.75
Oats.....do.....	31.89	34.99	30.70	35.22
Pease.....do.....	49.74	53.31	49.03	52.12
Beans.....do.....	63.07	62.12	63.78	62.86
Lentils.....do.....	97.10	98.53	94.72	97.82
Potatoes.....do.....	11.78	12.42	11.57	12.33
Hay.....do.....	13.16	12.30	13.04	12.69
Beef:				
Wholesale.....do.....	249.74	251.33	248.23	250.38
Round of leg (retail).....per 2,204 pounds...	.32	.33	.32	.33
Flank (retail).....do.....	.27	.28	.27	.28
Pork (retail).....do.....	.31	.33	.31	.33
Veal (retail).....do.....	.30	.31	.30	.31
Mutton (retail).....do.....	.29	.30	.29	.30
Bacon, domestic (retail).....do.....	.36	.38	.35	.37
Lard, domestic (retail).....do.....	.37	.38	.35	.37
Butter, table (retail).....do.....	.52	.51	.53	.52
Eggs (retail).....per 5 dozen...	1.03	.85	.83	.84

HENRY W. DIEDERICH,

MAGDEBURG, *January 30, 1899.*

Consul.

SCARCITY OF MEAT IN STRASSBURG.

I believe there is hardly a place in the German Empire where the scarcity of meat is more apparent than in the city of Strassburg. Having a population, according to the census of 1895, of 135,608, which has increased since that date at a good rate, and including a military garrison of over 15,000 men, the demand for meat is naturally large. The restrictions of the importation of American meats have been unfortunate; the more so because at the same time the home supply has been curtailed by the prevalence of different sicknesses among cattle, hogs, etc.

In consequence of the scarcity of meats of all kinds, prices are

high. Beef costs from 14 to 33 cents a pound; pork, from 13 to 22 cents; mutton, from 15 to 25 cents; veal, from 12 to 36 cents per pound—according to quality and cut. Poultry, game, etc., are so expensive that only the wealthy can afford them. Many families are compelled to forego the use of meat entirely, or to adopt horseflesh as a substitute for those generally used.

The consumption of horse meat has grown in all parts of the country. According to figures given by the statistical bureau of the city of Strassburg, there were slaughtered in 1896, 822 horses and mules; in 1897, 899; and in 1898, 1,099. The killing is done at the public slaughterhouse.

The price of horse meat is also going up steadily; it ranges now from 6 to 8 cents per pound.

MAX J. BAEHR,
Consul.

KEHL, *February 7, 1899.*

AGRICULTURAL EXHIBITIONS IN ITALY.

BEET-SUGAR MACHINERY.

The agricultural associations of Upper Polesine, of Lendinara, and of Lower Veronese-Legnago have organized an exhibition of machinery and implements adapted to the cultivation of the sugar beet, to take place from February to October of the present year. The programme comprises the following classes of exhibits:

- (1) Implements for working and preparing the soil.
- (2) Machinery for sorting and selecting the seed.
- (3) Machinery for distributing fertilizer.
- (4) Implements and machinery for sowing the beet seed.
- (5) Weeding machines and pruning instruments.
- (6) Machines for gathering the crop.
- (7) Machinery for cleaning and dressing the roots.
- (8) Implements used in the loading and transportation of the beets.
- (9) Coverings for protecting the beets when not housed.
- (10) Methods of storing, pressing, and preserving.

GENERAL AGRICULTURAL EXPOSITION.

An exhibition is to be inaugurated shortly in the town of Mirano, exhibits being classified in conformity with the following programme:

CLASS I.—ANIMAL PRODUCTS.

Category 1.—Silk cocoons.

Category 2.—Manure and fertilizers.

Category 3.—Cheese, butter, and sausages.

Category 4.—Honey, wax, and soap.

Category 5.—Anticryptogamic substances.

Category 6.—All other products of an animal nature.

CLASS 2.—VEGETABLE PRODUCTS.

Category 1.—Cereals: Samples of wheat, maize, oats, rice, sorghum, etc., showing exceptionally abundant products under normal systems of cultivation.

Category 2.—Fiber-producing plants, as hemp, flax, etc.

Category 3.—Grapes, preferably those qualities adapted to shipment.

Category 4.—High-grade wines; ordinary wines—samples of any production of especial importance.

Category 5.—Cordials, liqueurs, and similar products; cream of tartar, crude and refined.

Category 6.—Grasses for feeding, both fresh and dried. Samples of specially abundant product under normal methods of cultivation.

Category 7.—Fruits, fresh and dried; preferably those cultivated for commerce.

Category 8.—Ornamental plants and flowers.

Category 9.—Flowers, fresh and dried, to be exhibited at a specified period during the exhibition.

Category 10.—Garden truck, fresh and dried, preference being given to qualities largely cultivated.

Category 11.—Roots and tuberous plants commonly cultivated—potatoes, carrots, beets—special preference being accorded to those products destined for commerce, and special regard being paid to results obtained in cultivating the sugar beet.

Category 12.—Green-house plants and grafting.

Category 13.—Brooms and brushes of all kinds.

Category 14.—Domestic rural industries—home-made linen, straw work, coops, matting, woodwork, adz and spade handles, wooden shoe soles, rakes, ox yokes, household utensils, rustic house and garden furniture, etc.

Category 15.—Mill products—samples of flour, bran, etc.; specimens of grain that has been subjected to a grinding process.

Category 16.—All similar products not specially mentioned among the foregoing as, for example, bread, macaroni, pastry, etc.

CLASS 3.—AGRICULTURAL MACHINERY OF ALL CLASSES.

Category 1.—Instruments and implements for tilling the soil—plows, single and multi share; cultivators, grubbing machines, rollers, harrows, etc.

Category 2.—Reaping and binding machines; grain-drying apparatus.

Category 3.—Implements adapted to agrarian industries, as implements used in household industries, machinery used in wine making, etc.

Category 4.—Mechanical appliances whereby steam and electric energy can be utilized in the processes of agriculture and in the treatment of agricultural products.

Category 5.—Appliances for the transportation of agricultural products and materials.

Category 6.—All similar instruments not mentioned in the foregoing, as apparatus for grafting, pruning, etc.

CLASS 4.—ANIMALS.

Bovines, hogs, sheep, goats, etc. (temporary exhibit at a period to be established).

CLASS 5.—PISCICULTURE.

Category 1.—Methods of catching the fish.

Category 2.—Studies of pisciculture.

CLASS 6.—MISCELLANEOUS.

Category 1.—Pamphlets, books, and printed matter relating to agriculture, collections, etc.

Category 2.—Plans for rural buildings; houses and outbuildings, including manure deposits, wells of all description, etc.

Category 3.—Financial administration of landed estates, etc.

CLASS 7.—INSTITUTIONS AND ASSOCIATIONS FOR THE MUTUAL BENEFIT OF THE AGRICULTURAL CLASSES.

Special category.—Reports and descriptions of banks, rural savings associations, agricultural syndicates, rural charitable institutions, cooperative dairies, country schools, agricultural instruction, etc.

H. ABERT JOHNSON,

VENICE, *January 23, 1899.*

Consul.

INTERNATIONAL EXPOSITION AT LIEGE.

The Liege international exposition will be held in this city beginning about May 1, 1903, and continue six months under the patronage of the Government of Belgium and the province and city of Liege. A beautiful and convenient site has been selected, covering about 200 acres, partly in the valley and partly on the hills.

Liege is admirably situated for the success of such an enterprise, being in one of the most densely populated industrial districts of Europe. The railroad and slack-water navigation facilities to the seaboard are excellent, both for passenger and freight. The city has 170,000 inhabitants. It is situated on the Meuse River, nearly 100 miles from the sea. The hotel accommodations are ample, and it is a beautiful place to spend a few weeks.

The importance of the manufacturing industries of this country, especially of the province of Liege, should suggest to the manufacturers of wood-working and labor-saving machinery in the United States the propriety of making extensive exhibits of their products at this exposition.

The promoters of this enterprise are leading men of Liege, and it is planned on a more extensive scale than the Antwerp exposition of 1894 or the Brussels exposition of 1897. Work on the construction of the buildings will begin early in 1900, at a cost of several millions of francs.

ALFRED A. WINSLOW,

LIEGE, *February 16, 1899.*

Consul.

EXPOSITIONS OF UNITED STATES GOODS ABROAD.

The following reports have been made in answer to inquiries from the National Business League, of Chicago,* as to the advisability of expositions of American goods in foreign markets:

FRANCE.

Consul Skinner, of Marseilles, under date of January 13, 1899, says:

I have not the least doubt as to the need of agencies for American goods in Europe. An eastern exporting association has been in correspondence with me on the subject of opening a permanent exposition in Marseilles, but I have not heard of any practical steps being taken to carry out the idea. If such expositions bore the stamp of Government in some manner, they would command respectful attention at once; and, to my mind, this would conduce materially to their success.

At this particular juncture in public affairs, Americans are disposed to consider with more earnestness the wants and possibilities of remote and uncivilized nations than those of the richer countries of the Old World.

Without wishing to suggest any diminution of effort in the directions named, would it not be well to press with more energy our campaign among peoples like ourselves, greater in individual resources and already our best customers? In the year 1897, the total imports received in the city of Marseilles amounted to 28,834,453 metric quintals, of which the United States supplied a very large portion. Few more important markets are to be found in the world than this; and yet, in spite of exchanges amounting to many millions of dollars between the ports of America and Marseilles, the American flag has not been seen in the harbor for at least three years, except floating from a few yachts, and the popular ignorance of the United States and its resources is great.

Take the food products in which Chicago is interested, for example. American hams are sold here in vast quantities every day, and yet the consumer does not know an American mark, and supposes that he is getting "prime Yorkshire" or anything but a Chicago ham. It is the same with sausages; these are made in the United States in imitation of the peculiar sausages of Europe and are, in fact, much better than the articles they imitate; but they are always

*Advance Sheets of the reports have been sent the league.

sold as of European origin and consumed as such. Here, we have staple products for which an established market exists; yet they are absolutely unidentified with the country of origin and therefore at the mercy of adverse legislation, should such legislation seem desirable. It seems to me evident that a determined effort should be made to put American goods, as such, before the people, for the purpose of establishing a reputation among the consumers themselves, who, knowing the value of a good article, would be its best champions in securing favorable terms of entry into the ports of the world.

To discuss in detail the many articles of American manufacture unknown in Europe would be a task too great for the purpose of this report. It is to the point, however, to mention the extreme conservatism of Old World nations as a fact requiring strenuous efforts on the part of our people to overcome. It needs no demonstration to prove that one of the best methods of overcoming this disinclination to adopt new things would be to maintain an exposition in important markets, where their virtues could be shown to the best advantage.

It is not sufficient, however, to simply advertise in the American way. We must have young men trained in foreign customs, familiar with the commercial languages, and equipped with tact and patience. Germany and England recognize this. The big shipping houses of Marseilles are schools of commerce, filled to a greater or less extent by British or German "volunteers," who are working for nothing or little more, for no other object than to gain an experience that will fit them for enterprises of their own. I know of young men who devote as much as five years to this sort of study, dividing their time among several countries, and thus fitting themselves for any kind of commercial work.

Commercial Agent Atwell, of Roubaix, writes on January 13, 1899:

A practical manner of introducing certain manufactured articles and food stuffs into general use in France would be an exposition of such products in Paris under the direction of competent agents speaking French fluently. For the success of the undertaking, it would be necessary for these agents to visit the various towns in France, in order to solicit trade personally. It is at this point that the consuls could be of aid, by furnishing lists of the principal establishments to the agents and giving them such information as they (the consuls) might be able to obtain.

There seems to be a large field in France for the introduction of American household articles, stoves, tools, and lumber. At present,

provincial towns depend for these articles on Parisian dealers. This increases the cost greatly, as there is, first, the expense of transportation from the seaboard to Paris, with octroi or town tax, then the transportation to the final market, with additional town tax, levied on all articles of food. This could be avoided by direct purchases from the American agent, who could have the shipment sent from America to the town in which the sale is made.

American tools are esteemed for their superiority over the French. The American lathe is considered the best in use. In nickeled articles, however, the attractive finish puts the tools beyond the reach of the ordinary consumer, as there is a high duty on nickel.

In America, the workman owns his own tools and takes pride in keeping them clean. In France, it is the custom to supply the workman with his tools, and, as he is consequently careless with them, it is requisite that they shall be of low price.

The rainfall here is heavy, and the climate damp. Artificial drying of bricks is a necessity. Brick-making machines are a success, but complaints have been made at this consulate within the last week that a brick-drying machine recently put up here by an American firm is a failure, through improper construction. Regret was expressed that the purchase had not been made in England or Germany, as experts are sent from those countries to oversee the working of machines sold by them. Improper introduction of American goods naturally causes prejudice to our articles, with a loss of reputation and future trade.

In conclusion, I can not dwell too strongly on conscientious compliance with the terms of the contract, and a faithful endeavor to supply information requested by the correspondent. I am told that failure to cable, as requested, recently excluded an American firm from a chance to bid on a large contract for yellow pine.

The points above mentioned are those which induce me to believe that the foreign expositions of American products would meet with sufficient success to warrant the undertaking by a syndicate of American merchants and manufacturers interested in extending their commerce.

IRELAND.

Under date of February 8, Consul Wilbour, of Dublin, says:

Expositions in this country, in order to attract attention, would have to be upon a large scale, involving expenses altogether out of proportion to any good that would be received at first; but eventually, they would be of benefit. In this market, every necessary want is supplied in some form, and, except in the case of an article

not produced here—typewriters, sewing machines, etc.—the seller must offer a better article at the same price or an article equally good at a lower price. The seller must study the market, finding out what is in use and the price. Then, if he can compete, he must bring his wares to the notice of the people through the regular channels of trade, or by employing agents familiar with the customs of the people. A stranger will rarely meet with success. Advantage might be taken of the country fairs, which are held in every county and town in Ireland at stated times. There are hundreds of them, and, if care were taken to adapt the nature of the merchandise to certain localities, these would prove of great advantage. In every case, it would be to the seller's advantage to consult the consul as to ways and means, and satisfactory evidence of the character and standing of the firm represented should always be furnished.

GUATEMALA.

Consul-General Beaupré writes from Guatemala, under date of January 9, 1899:

The matter of establishing foreign expositions of American goods is one of great importance, and a beginning in this line has already been made by opening a sample warehouse in Caracas, Venezuela, under the direction of the American Manufacturers' Association. Whether under the auspices of our Government or of private enterprise, there can be no question that permanent trade bureaus in foreign capitals would be a great factor in expanding our trade.

Speaking of South and Central America, I am of the opinion that, from the standpoint of personal gain, a combination of manufacturers and merchants strong enough to establish bureaus in all the principal cities, with a general office in the United States, would reap far greater rewards, proportionately, than would the whole body were the National Government to undertake the enterprise.

The cream of the trade of these countries has been and continues in the hands of great exporting houses—commission merchants—in Hamburg, London, and other centers, and these houses have hundreds—yes, thousands—of customers in all South and Central America; and because of their ability to buy in enormous quantities—taking the whole product of certain factories—they can sell cheaper than the individual manufacturer. Merchants here tell me that they have been able to buy California canned salmon cheaper in London than they could in San Francisco; and not only this, but that they could buy a dozen cans if they desired. The same is true in other lines. A merchant told me the other day of buying some

galvanized corrugated iron. He wanted a certain kind manufactured in England, and he got it of a Hamburg firm much cheaper than he could get it of the maker, and this was because the Hamburg firm had received a very large order from Brazil and included the Guatemala order with it.

A trade bureau representing the same manufacturers and merchants in all the important cities of Latin America, with a general office at home so that orders could be consolidated, would work in the same advantageous manner.

Under whatever management it may be deemed best to establish them, permanent trade bureaus or expositions of our products in foreign countries would not only show these people what we have for sale, but would be the means of furnishing our merchants and manufacturers correct information regarding the class of goods desired for the different countries, the kinds of implements of labor commonly used, etc. We can not expect to get much business through the indiscriminate circulation of catalogues; we can not expect much of traveling agents who are deficient in knowledge of the country and people, even though they understand the language. Climatic conditions, peculiarities of the people, methods of packing, effects of customs duties and exchange, transportation facilities, and various other questions so essential to trade can not be understood without sufficient investigation; and upon these subjects, the bureau could supply information, besides serving as an exposition.

PRICES OF AMERICAN LUMBER AT ROTTERDAM.

The following quotations will probably be of interest to American lumbermen. The report is obtained from one of the largest dealers at Rotterdam and is dated February 4, 1899:

The new year has set in fairly with a greater demand and better prices than in the last months of 1898. The conditions for shipping up the Rhine are also good, and Germany has been an excellent buyer during the past weeks.

Walnut logs of fair size and good quality are continually in brisk demand, with improving prices. We sold during January, 119 logs, part of which averaging 21 to 22 inches, straight, sound, and well cut, brought \$102, and part averaging 19 to 20 inches, \$90 to \$92 per 1,000 feet Scribner. There are buyers for more of such logs, and shipments are solicited.

White-oak logs are wanted, no shipments having arrived during the past six or eight weeks. Prime logs, 24 inches and upwards, will realize \$45 per 1,000 feet Scribner, and perhaps more.

Whitewood logs are badly wanted, as there have been no shipments for some time. Logs 28 inches and up will bring \$42 immediately upon arrival.

Gum logs are quiet, at \$50 to \$55.

Hickory logs bring \$48 to \$52.

Gum boards and planks are in very good demand; prime quality, plain sawed, 1 to 2 inches or more, bring 60 to 66 cents per cubic foot.

Oak scantlings, 4 by 4 inches and 12, 14, and 16 feet long, bring \$38 per 1,000 feet.

White-oak stair steps, 1 $\frac{3}{4}$ by 11, 12, and 13 inches, bring 64 to 66 cents per cubic foot.

Cottonwood boards and planks are in brisk demand—1 to 2 inches or thicker, also three-fourths of an inch—at \$28.50 to \$29.50 per 1,000 feet.

North Carolina pine is firm. Yellow pine (pitch pine), 1 to 4 by 11 inches and up, is at present quoted at \$52.50 to \$58.50.

The name of the firm from whom I have obtained these quotations is J. C. & Th. H. Leyenaar. These gentlemen were among the first to commence the importation of American logs and lumber to this city.

S. LISTOE,
Consul.

ROTTERDAM, *February 10, 1899.*

AMERICAN LOCOMOTIVES IN ENGLAND.

Consul Smyth writes from Hull, February 18, 1899:

A few months ago the announcement was made in some of the English papers that the Midland Railway Company had closed a large contract for new locomotives with American builders. This news naturally created a great deal of controversy, especially in railroad circles, where it fell like a thunderclap. The British public have been waiting ever since for some explanation on the subject, and that was formally delivered yesterday at the annual meeting of the company in Derby, near Nottingham.

The extract below is taken from a review of the chairman's speech, and appears in all the metropolitan dailies and leading provincial journals this morning. It is regarded both in public and private quarters as a striking example of what can be accomplished through the resources of American manufacturers, as well as by the progressive and energetic spirit that brings them into action. The Midland Railway, I may add, is one of the foremost of British systems, and one of the best organized and best equipped in the world. The reasons which prompted the company to place this order in the United States are explained in the clipping, and will be read with a lively sense of interest by all classes of the American people.

AMERICAN LOCOMOTIVES.

It would be seen that the directors had ordered some locomotives in America, and, as this was a new departure, no doubt some information on the subject would be of interest. He would much prefer to order goods of any kind that were of home manufacture, and he might say that the question of cost was not one that entered

into the calculations of the directors when asking for tenders from over the water. The increase in their train mileage had been very large lately, being in 1898 considerably over 2,000,000 miles; and it was obvious, therefore, that additional engines must be purchased. For years past, their locomotive superintendent (Mr. Johnson) had impressed upon them that they worked their engines too hard. He believed the ideal position, according to Mr. Johnson, would be that they should have 75 per cent in steam; but 90 per cent had been much nearer their figure, so that there was no margin. They had now on order in this country one hundred and seventy engines. They commenced ordering in December, 1897, and the first delivery should have been made in July of that year, and they should have been receiving a number in each month, which would have made up a delivery to the present time of forty-eight engines. The company had not received one of these. The last order given was in November of last year for twenty engines at an extravagant price, and the makers did not even promise delivery of one for fifteen months, the order to be completed in May, 1900. Locomotives were a necessity to the company; they must have them, and so the directors determined to ask for tenders from America. They asked for tenders for ten engines each from two firms—the Baldwins and Schenectadys—and they received offers to deliver in the one case within ten weeks from the date of the receipt of all necessary information for construction, and in the other case shipment from America was promised for March next. This offer was made in December, so that, while the directors could not get an engine made in England and delivered in Derby in less than a year and a quarter, they could get twenty from America in four months. The engines would be of the American type, with certain alterations which Mr. Johnson considered desirable. They would be of the same power as the Midland engines, and it would certainly be interesting to watch their performance, as Mr. Johnson—and he hoped all his staff—intended that they should have fair play in every particular.

A duplicate clipping was forwarded by Consul Boyle, of Liverpool, under date of February 20. Mr. Boyle adds:

No one item in connection with American imports into Great Britain has attracted so much attention over here as that relating to the recent order by the Midland Railway Company of England for twenty American locomotives. Various reasons for the order have been suggested. Although the officials of the railway company have been reticent, it has been generally accepted that the real reason was the inability of English shops to turn out the engines within the time required. Probably, the engineering shops of Great Britain have never been so busy as they are now. There are several reasons for this. First, there are a vast number of domestic and foreign orders which had accumulated during the engineers' strike; then there is the great demand for engine work for steamships, both mercantile marine and navy; and, lastly, there are the orders growing out of the widespread movement in the British municipalities for public improvements—electric lighting, street railroads, waterworks, etc.—which have created an unprecedented demand for machinery and steel and iron structural work.

Here, then, is the opportunity for the surplus products and surplus labor and energy of the United States. In addition, there is the important fact that it has been demonstrated, in nearly every line of work in special demand here, that the United States can produce cheaper than England; and, while but little is said about it, there is a well-founded belief that the American locomotives for the Midland Railway will be delivered here at a considerable reduction as compared with the price of English-made locomotives. At any rate, it can be accepted that the order is an experiment. English mechanics concede that locomotives can possibly be now built cheaper in the United States than in England, but they deny that American engines are as good as English, especial reference being had to durability, and, weight for weight, they claim that the English locomotive is the stronger.

Should the Midland's American locomotives prove a success—that is, cost less money than the English and yet be as strong and serviceable and durable as the English make—it is safe to predict that other orders will follow. One need not be a mechanical expert to observe that the average English locomotive does not haul nearly as heavy a load as the average American locomotive. Frequently, two engines are used over here for a load which one American locomotive would haul with ease.

AMERICAN MULES AT MALTA.

On April 1 of each year, that department of the British army at Malta known as the army service corps is allowed \$1,459.95 (£300) to expend in the purchase of mules. I have been asked by a prominent official of the above corps if, in view of the direct line of steamers between New York and Malta and other ports which has just been established by the Mediterranean and New York Steamship Company, it is not possible for the authorities here to secure American mules for government use. The authorities require on an average 20 mules each year (often more) to take the place of animals retired from the service. The animals must not be over 6 years of age, stand 15 hands high at least, and be sound and broken to work single or double. Mules are used quite largely here, but the majority for military purposes. I am informed that the military authorities will not mind paying £15 (\$72.99) each for satisfactory animals; and, personally, I believe that, owing to great difficulty in getting hold of superior animals, even better prices may be realized, especially after a sample lot is received from the United States. The average American mule is far superior to the kind

now in service here, and I believe would prove preferable after due trial. An American breeder, I think, might easily secure a permanent demand here for his stock.

The only statistics on the subject I have been able to obtain were compiled for the year 1897, and from them I gather the following information: From Tunis 89 animals were imported, at a valuation of \$38.93 each. One mule came from Barbary and was valued at the same amount. The military authorities obtained 43 mules from Turkey, at a valuation of \$43.79 each. Five mules of the same value came from Algiers, while from England 8 mules were imported, at a valuation of \$68.13 each. The above valuations were the average prices, estimated officially for customs purposes.

The mule used at Malta is rather a sorry-looking animal, as a rule, being poor and small. The authorities desire to improve the character of this part of the service. Horses and mules arriving here are required to undergo a quarantine of twenty-one days. Necessarily, before being accepted, all animals bought by the military authorities are inspected. Being for military purposes, no duty is levied upon them. Those desiring to investigate the matter further should address communications to the "Commanding Officer, Army Service Corps, Malta."

In conclusion, I would say that the requirements above given include free on board at Malta. The agents of the steamship company available for the transportation to Malta are Phelps Bros. & Co., 11 Broadway, New York.

JOHN H. GROUT, Jr.,

MALTA, *January 27, 1899.*

Consul.

AMERICAN WHEAT AT MALTA.

Some weeks ago, the governor of Malta, as a result of a resolution passed by the council of government, appointed a committee, most of the members of which are connected with the local chamber of commerce, to investigate and report on the flour and wheat trade. This committee has not yet sent in its report, and probably will not for some time to come. Believing there might be something in the question and also the action of the government of interest to American trade, I have been making an investigation, and from the work thus far performed, I am strongly of the belief that there is a good chance for American wheat to soon supersede the Russian, now holding the market here. To begin with, I find that the future policy of the government will be to encourage the importation of wheat to these islands, to the end that there may always be a large stock

on hand. The importance of Malta as a military and naval station will at once reveal the reason for this. During the past summer, at one time, the supply in storage was very low, and the price of bread was somewhat higher than usual. There is a heavy duty here on flour and wheat, although, of course, that used by the army and navy pays no duty. From all I can gather, the idea is to reduce the duty on wheat, which now appears on the tariff at 10s. (\$2.43) per salm (1 imperial quarter=one-fourth of a ton), and to increase the duty on flour, now at 6s. (\$1.45) per cantar (175 pounds).

There are several mills for grinding wheat here, some of which are of the old stone variety, and, by its contemplated action, the government hopes to encourage the local milling industry as well as the importation and storage of wheat. Russian wheat, known here as "Taganrog," has monopolized the market for a long time, except when high prices led to the introduction of wheat from India. Having used it so long, Taganrog wheat is favored by the native population. Flour for the army and navy is manufactured at a large mill under government supervision.

For various reasons, the military authorities are in favor of using American wheat. From a reliable source I have gained the following information:

The monthly requirement of Malta is, approximately, 11,000 quarters of wheat and flour. Of this amount, about 10,000 quarters of wheat are used in the islands. The army and navy use some 1,000 quarters, or about 250 tons, and nearly all of this is of Russian production. Some of it is not as clean as desired. Of late, there has been much complaint on account of the large percentage of damaged wheat in storage. It is believed that American wheat, after it is once introduced, will prove in every way satisfactory. Recently, the military authorities, in the course of the investigation now being made, procured a sample of American wheat. It was ground up and, while making fairly good flour, did not prove exactly what was required, inasmuch as the grains were too small and the percentage of flour resulting too low. The sample sent made but 56 per cent, whereas 62 pounds to the bushel, or 502 pounds to the quarter at the lowest, is required. A recent experiment with the Russian Taganrog wheat showed the following result, which may be of interest to those seeking foreign markets: Firsts, 68 per cent; seconds, 12 per cent; bran and pollard, 17 per cent; loss in cleaning and grinding, 3 per cent.

American wheat, to gain a footing at Malta, must, in the first place, be large in grain and, above all, well cleaned. What is wanted is a good food producer, and Malta has no use for any other. As to prices, from what I am told by those in a position to know, our

wheat stands a good chance. When American wheat is quoted at 34s. (\$8.26) at London, the price here is from 42s. to 50s. (\$10.21 to \$12.16) per quarter. As a rule, Malta pays 8s. (\$1.94) more than London. About 150 tons per month are needed by the army and navy. If we can land wheat here 5s. (\$1.21) cheaper than the London price, we can, I believe—and it is the opinion of others also—command a good market. I am also told that under the above conditions we should be able to place 1,000 quarters per month for the army and navy and 2,000 for the civil population.

Now, a word as to handling grain here. There are no elevators and vessels do not lie alongside wharves. All freight is handled by lighters. Upon its arrival here, wheat is kept on lighters or placed in storehouses near the harbor for a few days, for purpose of inspection or sale, after which it is stored in government fosses. The cost of fossing and unfossing is about 40 cents per quarter, while the government fee is 4 cents per quarter for rent of fosse per year. Very often, wheat is kept in storage for many months and often several years. In order to keep, wheat must be very clean, as otherwise weevil attack it, and loss is the result. The sirocco winds, which prevail during certain seasons of the year, often prove a source of danger; but a superior quality of wheat, as a rule, withstands this.

The first step toward securing a foothold here is to satisfy the military authorities. Having done this, they will prove valuable agents towards extending its use to the civil population. At present, the Maltese population is in favor of Taganrog, but it is believed that a few exhibitions given by the military authorities to the Maltese millers will prove convincing. The following may give a few additional points to our dealers, and will perhaps serve to show the interest of the authorities here in securing our wheat:

CIRCULAR ISSUED BY THE ASSISTANT ADJUTANT GENERAL.

HEADQUARTER OFFICE, 215 STRADA FORNI,
Valletta, December, 1898.

DEAR SIR: I send you a sample of flour which was ground in the army service corps mill, Strada Forni, Valletta, on the 10th of November last, from soft white wheat which had been over four months in this island.

You are perhaps aware that the army service corps mill is an ordinary stone one of the same kind as most of the others in these islands.

If you like, you may come and inspect it between 11 a. m. and 12 noon, any Wednesday that suits you next month. There will be someone to show you around and explain things. You must bring this letter, please.

It has been generally supposed that soft white wheat can not be properly treated in the Malta mills, and that it can not be kept in fosse. But when you come to the mill, you will be shown some white wheat that has been twenty-one months* in fosse in these islands and that is in good condition now.

*Since March, 1897.

I submit for your consideration, as also for that of other millers here, that it would be advantageous to import and grind soft white wheat. You get more good flour from it than from the same quantity of red; thus it is economical. The bakers and macaroni manufacturers would buy it of you instead of importing it for themselves already ground. The bread in use in the islands would be whiter, of better quality, improved in appearance, and perhaps cheaper. You must recollect, however, that this flour improves by keeping. It gets whiter every week, and its capacity for taking up moisture increases daily. It should never be used until it has been ground three months. This is the principal reason of the imported flour being so useful to bakers and macaroni makers.

When you visit the mill, please ask to be shown some American red wheat called "Northern Spring," as also some flour ground from this wheat. The grain is small, but the weight is good—502 pounds to the quarter. I should say it would keep well in fosse, as it is hard and clean. Importers say that it can be placed on our Malta market at about 8s. the salm cheaper than that known as "Taganrog," weighing 492 pounds to the salm.

In several of my recent reports, I have laid particular stress upon the need of direct connection between Malta and the United States. With direct communication, thus avoiding delay, damage by reason of rehandling, and heavy freight rates, wheat ought to form a good part of the regular cargoes coming to this port. Should the British Foreign Office assume full control of the ordering and purchase of wheat for the military at Malta, it will be seen that cargoes coming from the United States direct will be preferred on account of freight rates, etc., and that that line which is established to run regularly will be in a position to secure the greater part, if not all, of the trade. At present, all purchases are made by the authorities here. It will be of advantage to American dealers to have their wheat indorsed by the authorities, as I am informed that, should samples be sent here and, after being tested, found satisfactory and up to the required standard, such brands would be certified to the home authorities and carry much more weight as to preference. This, of course, applies in case the wheat is bought by the Home Office. I would recommend to those dealers desiring to enter this field that they send good-sized samples, from medium up to the best, and on no account send poor goods. As there are two classes—the military and civilian—to consult, it would perhaps be best to direct samples to the firm of C. Breed Eynaud & Co., of Valletta, Malta. I suggest this firm as it is an old one, and has made a specialty of American goods for many years. Any further information on the subject I shall be pleased to give promptly upon application.

JOHN H. GROUT, Jr.,
Consul.

MALTA, *January 14, 1899.*

STEAMSHIP COMMUNICATION WITH MALTA.

Malta, it would appear, has at last secured direct communication with the United States. I have just received word that the Mediterranean and New York Steamship Company, Limited, has decided, after several months of investigation, to have some of its ships leave New York for Malta direct and thence run to Trieste. To those of our merchants seeking an increase of foreign trade, this will be of much interest. Probably, before this reaches the eye of the reader, the first ship, the *Picqua*, will have left New York upon its first trip. It is intended to run the boats regularly, provided, of course, there is sufficient encouragement given by purchasers and shippers.

I believe that if our merchants display a little activity in this direction, it will result in the advent of many new lines of our goods at Malta, as well as an increase in the demand for those of our wares already in the field. The great and almost insurmountable obstacle which has for many years hindered the sale of our goods here has been the lack of direct communication with American merchants. All goods that have reached Malta have come by way of transshipment from ports of the United Kingdom and Europe, and this has meant vexatious delay, damage to goods incidental to repeated handling, and high freight rates. The new line will change all of this.

Maltese merchants seem to have a high regard for American goods and, while the field is not large, I believe that there is now a chance for many of our lines. I may state, however, as an exception, that there is very little demand for machinery here, there being no manufactories, hand work prevailing. The demand for tinned goods, hams, bacon, lard, tobacco, flour, wheat, and other products now used here to a limited extent should increase.

As a rule, the merchants of Malta are not acquainted with those in the United States, but this may be easily changed by correspondence; and, in this connection, I would say that, as it is impossible to print here a business directory of Malta, I will, with pleasure, supply any required addresses of merchants in any desired line upon application, or see that any illustrated catalogues that may be sent me are distributed to the right parties.

To the American merchant who has goods to ship to Trieste, I would say that by giving this line the preference, he will be lending encouragement not only to this company, but to an increase of trade with Malta. Banking facilities at Malta are excellent and ample, while there is an absence of the many petty annoyances in

the way of port charges, etc., to be found in many other Mediterranean ports.

I have done much locally to call attention to the advantage of direct communication with Malta, and find the business men here unanimously in favor of it, and believe that they will give the new line their hearty support. Malta is considered a free port in that but few imports are assessed duties, while there are no export charges. Harbor facilities are of the best, and goods are handled well and expeditiously. Further information as to the above line may be obtained from the New York agents, Phelps Bros. & Co., 11 Broadway.

JOHN H. GROUT, Jr.,
Consul.

MALTA, *January 25, 1899.*

AMERICAN FLOUR IN BRUSSELS.

I transmit translation of a letter addressed to me by Mr. Louis Moulart, proprietor of the Grande Boulangerie Viennoise, No. 42 rue au Beurre, Brussels, which will explain itself. Mr. Moulart is considered the leading baker in Brussels, and consequently his opinion as to the kinds of flour needed and the manner of exporting same to this market is worthy of particular attention. Mr. Moulart informs me that other bakers in Brussels would be pleased to import American flour, if they could buy it direct from the millers and have it consigned to them, instead of receiving it through middlemen at Antwerp, New York, and elsewhere. His letter reads:

I take the liberty of submitting some information regarding the importation of American wheat flour. First, we bakers find it very much easier to get our flour from Hungary, for the following reason: I receive at least every month a letter from one or two Budapest mills, giving me quotations and soliciting an order. Five or six weeks afterwards, I receive the flour free at Brussels, and I pay against sight draft on a Brussels bank against remittance of documents.

As regards American flour, conditions are much more complicated. Flour consigned to Antwerp is very often offered to us, but at exceedingly high rates; or an Antwerp middleman asks us to give orders for 500 or 1,000 sacks of such quality and brand of flour as may be known to us. When the order is accepted by the mills, we have to wait from six weeks to two and even three months before the merchandise is delivered; and this irregularity in delivering orders hampers regular business connections with your country.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *February 9, 1899.*

BELGIAN RESTRICTION ON UNITED STATES FRUITS AND PLANTS.

I have the honor to transmit herewith translation of a royal decree dated February 3, 1899, which appeared in the official journal, *Moniteur Belge*, on February 10, 1899, relative to the importation and transit of fresh fruit, living plants, and parts of living plants sent from the United States.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *February 14, 1899.*

To whom it may concern, greeting:

According to the law of December 30, 1882, and especially article 1, worded thus:

"The Government is authorized to prescribe by royal order such measures as fear of invasion or existence of contagious diseases of domestic animals may render necessary in the interior of the country and on the frontiers, in commercial relations with foreign countries. The same power is accorded the Government to prevent or combat the propagation of insects harmful to crops."

In view of the fact that the insect known under the name of San José scale (*Aspidiotus perniciosus*) causes considerable ravages in the forests and orchards in several States in the United States of North America, that it has been found in fruits sent from that country to the continent of Europe, and that in consequence it is necessary to take measures of a nature to prevent the introduction of said insect into this country.

Upon the proposition of our Minister of Agriculture and Public Works, we order:

ARTICLE 1. Independently of formalities prescribed by the royal decree of the 15th of September, 1885, taken in view of the international convention regarding phylloxera, the importation and transit of fresh fruits, living plants, and fresh parts of plants, sent from the United States to Belgium, can take place only by the ports of Antwerp, Ghent, and Ostende, upon the production of a certificate from competent authority attesting that the products therein specified are not contaminated by the San José scale. The importation and transit of products of the same kind coming from other countries are subject to proof of origin satisfactory to the customs authorities.

ART. 2. The products mentioned in article 1 which are not accompanied by a certificate legalized as mentioned in the preceding article, can not be delivered to the person to whom addressed, until duly inspected and found exempt from the said insect. If the contrary is true, they are to be immediately destroyed with the packings.

ART. 3. Our Minister of Agriculture and Public Works will designate experts to take charge of the examination as directed in article 2 and to cause, if necessary, the destruction of the products and objects contaminated by the insect. He will also regulate the examinations and expenses arising therefrom. The cost of this service, as well as that resulting from the destruction of the products and objects contaminated by the insect, to be at the expense of the importer.

ART. 4. The order is not applicable to shipments in direct transit by railway under the supervision of the customs authorities.

ART. 5. Our Minister of Agriculture and Public Works is charged with the execution of the present order, which will go into force the 15th of March, 1899.

AUSTRIAN VIEW OF UNITED STATES TRADE COMPETITION.

Consul Baehr sends from Kehl, under date of January 25, 1899, a review of a lecture by a Viennese authority on political economy, Dr. Alexander Peez, on the subject "America, Europe's most dangerous rival." Dr. Peez said, in part:

Let us see how the American industries are prospering. We have first the sugar industry. It is not known yet how we will be able to make up for the loss of our sugar export to America. The United States has taken Cuba and is going to have the enormous quantity of sugar it needs supplied, if possible, by the home product and that grown in Cuba. The enlargement of its balance of trade is the fundamental principle of its commercial policy, and its Government acts with great boldness. The Americans have already gained this much, that they export goods to Europe valued at \$1,200,000,000, and, on the other hand, import only for about \$600,000,000. This balance will be still more to their benefit when they are able to produce enough sugar in Cuba and Puerto Rico to supply their needs. This will probably take them about seven years. We shall have to make good use of this space of time.

I wish also to make some remarks about the paper industry. We all know that this was one of our most flourishing industries. In former years—I regret that I have to speak of the past—some of the English newspapers were printed on Austrian paper. Now, the United States has wrested this trade from us, and is already supplying most of the papers used in England.

We can not give enough attention to the United States. Last spring, I was in Trieste and learned that there were in the ports of Constantinople, Fiume, Salonica, and Trieste about 30,000 quintals of American pig iron, of which the greatest part came from Arkansas and the Mississippi Valley. You may say that the iron falls there from the furnace right into the vessels, and is brought at very low freight rates into the Mediterranean Sea. At the same time, American iron makes its appearance, crude and manufactured, in the Elbe district in Bohemia.

So far as machinery is concerned, we all know how the Americans are working. The very best of machinery, few workmen, but those well paid—that is their great system, and there is no doubt it is also the system of the future.

Recently, the United States has also made great progress in the field of chemical science. Cotton oil, a product of cotton seed, was once a sticky brown-black paste; the Americans have found out how to purify this formerly nearly useless stuff, and the product is now being sold as cheap cooking oil, and finds ready buyers.

Not long ago, I saw American shoe leather, fine, light, and smooth. It was made from skins of Indian goats, but finished in the United States; and all experiments made in England and Germany to produce a similar leather have failed.

These are only a few instances. The industries of the European continent will, in many branches, have to count with American competition as well as with English.

Consul Baehr adds:

Dr. Peez's lecture was followed by a discussion. In the course of the latter, the speaker dwelt upon the wonderful rapidity with which the Americans, in their war with Spain, increased and equipped their Navy. In America, Dr. Peez said, the whole population consists

of skilled men and shrewd merchants, who bring about the wonderful progress of the country. He repeated what he has been advocating for years—that the countries on the European continent would have to form a coalition to protect themselves against outside competition.

UNITED STATES TRADE WITH ROUMANIA.

Minister Rockhill sends from Athens, under date of January 3, 1899, a table showing the nature, bulk, and value of the import trade from the United States into Roumania during the last ten years. This trade, says Mr. Rockhill, shows a satisfactory increase during this period and would seem susceptible of considerable development, though it is to be regretted that the exports from Roumania to the United States remain practically nil. The value of the import trade from the United States is approximately 0.25 per cent of the total import trade of Roumania.

Importations into Roumania from the United States from 1888 to 1897.

Articles.	1888.	1889.	1890.	1891.	1892.
	Kilos.*	Kilos.*	Kilos.*	Kilos.*	Kilos.*
Live stock.....					18
Fruits (other than tropical), vegetables (other than farinaceous), and other vegetable products.....					225
Colonial products and tropical fruits.....		37,947	5,402		22,368
Canned goods and preserves.....				125	276
Vegetable juices (medicinal kinds) and medicines.....		5,336	1,830		21,138
Perfumery.....					40
Dyeing matters, tannin, colors, and lacquers.....				100	
Oils, grease, wax and its derivatives.....			12		4,610
Hides, harness, various objects of hide or leather, shoes, and skins.....					105,270
Caoutchouc, gutta-percha, objects made of them.....					10
Textile fabrics and derived industries.....			1,183	26,555	3,312
Paper, pasteboard, and objects made of them.....				82	65
Woods and derived industries.....				3	796
Combustible minerals, bitumen, and derivatives.....	3,190				
Mineral substances, ceramic industries, and vitreous objects.....					250
Metals and metallic manufactures.....	2,159	1,636	38,217	358,732	480,331
Boats.....					1
Works of art and curiosities.....					1
Various substances, compositions, and manufactures.....		7		2	4
Total.....	5,349	44,926	46,644	385,599	638,714
Value of above importations in United States currency.....	\$871.20	\$20,043.43	\$14,091.50	\$117,730.96	\$179,157.46

* 1 kilogram = 2.2046 pounds.

Importations into Roumania from the United States, etc.—Continued.

Articles.	1893.	1894.	1895.	1896.	1897.
	<i>Kilos.*</i>	<i>Kilos.*</i>	<i>Kilos.*</i>	<i>Kilos.*</i>	<i>Kilos.*</i>
Animal food products.....					969
Colonial products and tropical fruits.....	6	14,996	2,219	450	8,268
Canned goods and preserves.....	325		68		47
Vegetable juices (medicinal kinds) and medicines.....	266	201		88	324
Perfumery.....			22		223
Dyeing matters, tannin, colors, and lacquers.....		1	1,451	40	1,179
Oils, grease, wax and its derivatives.....	4,894	201	1,415	128	
Hides, harness, various objects of hide or leather, shoes, and skins.....		41	23,874	79	525
Caoutchouc, gutta-percha, objects made of them.....				1	9
Textile fabrics and derived industries.....	1,112	70	693	156	35,710
Paper, pasteboard, and objects made of them.....	36	398	248	175	594
Woods and derived industries.....	10	26	18,996	2,096	203,399
Combustible minerals, bitumen, and derivatives.....		750		221,920	
Mineral substances, ceramic industries, and vitreous objects.....	5	105	71	168	497
Metals and metallic manufactures.....	751,352	811,143	272,565	460,334	622,974
Wagons (Carronerie).....	50				
Various substances, compositions, and manufactures.....	18	1	17	86	79
Total.....	758,074	827,933	321,439	694,971	875,747
Value of above importations in United States currency.....	\$221,599.51	\$243,473.75	\$90,088.73	\$140,483.63	\$202,339.85

* 1 kilogram=2.2046 pounds.

THE WORLD'S WOOL MARKET AND THE UNITED STATES.

The following report is taken from an article by Messrs. Fred. Huth & Co., who have given a most excellent review of the situation of the wool market as it affects the commerce of France.

Two causes have had a serious effect on the wool market and the general wool industry. The first of these is the great decrease in the Australian production, with the consequent scarcity of merino types and the absence of the American demand either for the raw material or manufactured product.

The deficit in the Australian production resulting from three consecutive dry seasons was foreseen, and may be estimated at about 160,000 bales. Drought is frequent in the colonies, but a falling off in the wool production in consequence of this has been remarked only during the last few years, as, heretofore, new runs have supplied the deficit. This is not now the case; woolgrowers, having become discouraged by the low price of their product, find a better market for their sheep as food, as refrigerator cars permit them to ship to distant markets.

It is probable that the only supply of wool for some time to come must be looked

for only from the runs now established, and one bad season like 1896 or 1898 will cause a real deficit. In 1898, the situation was somewhat relieved by the surplus New Zealand and La Plata wools. The merino type has been gradually decreasing for the past three years, and is not larger now than ten years ago; cross wools are constantly increasing. Forty per cent of the whole production of the colonies and La Plata is of the cross-breed type, against 18 per cent in 1888. The scarcity of the merino type and the abundance of common types could not fail to react on the market; so, notwithstanding the unsettled and unsatisfactory condition of business, merinos have risen 8 to 10 per cent, fine cross wools are stationary, and middling and common types, which compose the greater part of the cross-breed production, have lowered 15 to 25 per cent.

These contradictory fluctuations have been injurious to the wool industry. Spinners of fine wool have suffered through the rise in the raw material, as they have not been able to compensate themselves by a corresponding rise in their manufactured product. Manufacturers of common wool have not been able to derive profit from low price, by reason of the constant falling tendency of the market. It is possible that the turning point has been reached, so far as common types are concerned; but any profit to be derived will be a matter for the future.

The wool industry in Europe, whether flourishing or otherwise, has depended, for the past five years, on the exportation to the United States. So long as the States bought, all was well, but when that market failed nothing remained to replace it. This immense influence is said to be due not so much from the importance of the trade as from the uncertainties resulting from the frequent and radical changes in the American tariff. The exportation of yarns and dress goods for the English market from the Continent is nearly stable and represents an annual sum of about \$40,000,000, which may fluctuate 10 per cent, according to whether the season is good or bad. In the United States, however, the importations during the last four years have varied from \$32,000,000 to \$5,500,000, falling off to one-fifth of the first amount in the course of one year. The same may be said of wool. There was a time, before 1893, when the American demand could be estimated. The statistics of the United States show that between 1887 and 1898 the value of importations of wool and wool goods from all parts of the world was annually about \$60,000,000 (in round numbers), the yearly difference before 1893 being slight, particularly taking into consideration the high prices of the first few years. Since 1893, however, there have been great fluctuations. The following is a table of the importations into the United States of wool and manufactured woollen goods from 1887 to 1898:

Year.	Value.		Year.	Value.	
1887.....	£12,100,000	\$58,884,465	1893.....	£8,800,000	\$42,825,200
1888.....	12,900,000	62,777,850	1894.....	6,100,000	29,685,650
1889.....	14,600,000	71,050,900	1895.....	18,800,000	91,490,200
1890.....	13,900,000	67,644,350	1896.....	11,900,000	57,911,350
1891.....	10,600,000	51,584,900	1897.....	18,500,000	90,030,250
1892.....	11,700,000	56,938,050	1898*	5,500,000	26,765,750

* Estimated.

Slight changes in the wool commerce of the world regulate themselves, for if the demand falls off in one quarter it increases in another; but no provision can be made against such wide variations as exist in the needs of a country as vast as the United States, which dominates the situation.

Last year, America bought very little on this side of the Atlantic. The manu-

facturing interests were seriously affected by this abstention, and if the supply of fine wool had not been limited during the past few years, the price would inevitably have lowered.

As to the future, no increase of production can be looked for in the colonies or in La Plata; next year will show no increase over this. The merino type will be scarce, and the price, though high, will probably remain firm; the cross types, abundant both in stock and production, seem to offer the same guaranty of stability at the low figure which they now command. It is probable that the market will remain firm, and a certain brightening of the situation may be looked for in the event of resumption of exportation to the United States. Aside from a slight increase of trade during the last two weeks, the indications from that quarter are not favorable. Stocks in bond diminish slowly, and the prices are lower than here. There are chances, however, of a revival of trade. The United States bought quite largely during the first half of 1897; since then orders have almost ceased, and it is probable that orders will soon come from there, as the general situation in the States, wool excepted, is very flourishing.

W. P. ATWELL,
Commercial Agent.

ROUBAIX, *January 19, 1899.*

COTTON-SEED OIL IN MARSEILLES.

The statistics relating to imports of American cotton-seed oil for 1898, which have just been collated, together with the fact that an extraordinary quantity of oil is now in transit for this market, has contributed to the sharpness of the fight which has for some time been waged between interests which oppose the introduction of American oil at the existing rate of duty and those which desire the maintenance of present conditions. A side chapter in the controversy is furnished by the recent arrival of soap stock in considerable quantities, for which it is not too much to assume that a steady demand will soon be established. At first glance, the arrival of American crude soap in Marseilles seems like the carrying of coals to Newcastle; but inquiry leads to the conviction that a trade in this commodity will speedily assume satisfactory proportions. The soap stock which has arrived is a product of cotton-seed oil caused by the refining process, the thick and fatty parts of the crude oil being precipitated and so treated as to be available for the purpose named.

The American cotton-seed-oil trade will be interested to know that the arrivals of the oil from the United States during 1898 at this port amounted to 51,003,097 kilograms (112,461,829 pounds), or 287,739 barrels, as against 42,027,792 kilograms, or 237,898 barrels, in 1897. The imports from England for 1898 amounted to 1,791,938 kilograms, and from all other countries 167,638 kilograms, making the total importations 52,962,673 kilograms (116,761,388 pounds), or 9,790,548 pounds more than during 1897.

The arrivals from the United States are catalogued as follows: Edible oils, 120,541 barrels; for soap-manufacturing purposes, 143,739 barrels. The total stock on hand of American oil on December 31 was 7,500,000 kilograms (16,537,500 pounds). The average price of the American oil during the year was 41.12½ francs per 100 kilograms (\$7.94 per 220.46 pounds). The average price for English oil was 40.25 francs (\$7.78) per 100 kilograms.

ROBERT P. SKINNER,

MARSEILLES, *January 27, 1899.*

Consul.

CONSUMPTION OF BEER IN SPAIN.

Mr. Mertens, in charge of the United States consular agency at Grao, writes, under date of January 27, 1899:

The captain of one of the German Lloyd steamers, upon bringing the "repatriados" to this port recently, expressed his surprise at the Spaniards' fondness for beer, regretting that he had not had a larger supply aboard during their journey, he, like many others, being under the false impression that the Spaniards do not drink beer.

The consumption of beer in this country is yearly increasing, and our American brewers, who can well hold their own against any beer makers of the world, should try to secure this country for a market, introducing the kind that will suit the Spanish taste. I would suggest that for an easy introduction, a Spanish brand or label in the Spanish language, with an appropriate sign to attract attention, might be chosen.

Nothing can be said against the enterprising American way of advertising the articles of home industry in different languages and by illustrations the world over; but in countries like this it requires a more imposing means to attract the attention of the public, and the style which several European countries have successfully adopted should be tried by our American manufacturers, viz, exhibitions on a small scale, of sample deposits, either in a certain important commercial place or on steamers touching from port to port and soliciting orders on their exhibits.

I beg to observe that since losing its colonies, Spain is studying seriously the question of raising both tobacco and cotton in this country, the soil and climate in various parts being admirably adapted for the purpose.

NIZHNI NOVGOROD AS A MARKET.

I would suggest the propriety and even the necessity of representation of our products at Nizhni Novgorod, Russia, on the occasion of the annual fair which is held there during the months of August and September. Within the last decade and a half, this fair has assumed most important proportions. When I visited it some twenty years ago, it was a general rendezvous for Russian and oriental traders, and but few Europeans and no Americans went there except as tourists. It is now an invaluable mart for the display of all kinds of manufactures, especially for machinery. In a book entitled *La Russie Industrielle*, a French author who had spent some years in studying Russian markets advised his countrymen to send specimens of all their manufactures to the great Nizhni fair. He said that the Russians wanted to see samples of the machinery they needed. They will not buy from descriptions or engravings.

French manufacturers know this, and they will be adequately represented there at the coming fair. France already has a consular agent at that point, who is credited by the *Moniteur Officiel du Commerce* of January 26 with having materially advanced French interests in that direction within a twelvemonth. The consular agent laid especial stress upon the possible market for woollen and cotton goods. He declared it a prime necessity to bring the manufacturer into direct contact with the buyer, and suggested the formation of a syndicate of manufacturers and dealers in woolens, cottons, silks, etc., the object of which would be the exportation of French goods into Russia.

The efforts of Russia toward industrial expansion, and the development of her immense mineral resources in the Ural Mountains and in the country opened by the Trans-Siberian Railroad render this field of enterprise especially attractive to American manufacturers. Last year, a proclamation of the Imperial Government granted free trade in all articles entering Russia for the next ten years to be used in the Ural and Siberian mines. Specimens of the machinery included in this ukase will be freely exhibited at the Nizhni fair this coming summer. Everything entering into the work of building and equipping railroads or developing mines, as well as agricultural implements, will receive the careful attention of people who represent vast mineral and agricultural interests, now on the eve of development.

The market being opened for manufactures in the vast region referred to is more or less connected with the Russian advance in

the northern portions of China. The Trans-Siberian Railroad, deflecting through Manchuria to Peking, Tientsin, and Pechili Gulf on the west, passing through Korea on the east, and sending a direct line to Talienwan and Port Arthur, will intersect the rich mining district of Shansi and establish connections with the Hoangho River. The mining districts of Manchuria are already being colonized by Russians, and Russian steamers now ply on the rivers of that region.

In possession of a Chinese frontier of 4,000 miles, Russia is making the best use of her opportunities to assimilate to her own people the inhabitants of all northern China. In offering free trade for machinery to be used in the mining industry, the Czar practically invites the great manufacturing states to aid him in the conquest of the populous East. The development of the mining interests of the Russian and Chinese Empires, the building of railroads, and the navigation of rivers, with the opening of the tea, silk, and rice countries through which they run, not to speak of the new line of railway through Afghanistan to the frontier of India, are enterprises in the execution of which Russia needs the cooperation of the great industrial nations of the world.

All agricultural implements, fertilizers, etc., which may be exhibited at the Nizhni fair will be brought before every farmer in Russia through the medium of the "artels," or agricultural societies, which, under encouragement of the Government, have rapidly multiplied in Russia during the last decade. They have representatives who are skilled, by scientific study and practical experience, in everything pertaining to farming, and whose business it is to look after and make recommendations upon stock raising, fertilizers, fodder, transportation, rates of freight, agricultural implements, etc. Anything of use on a farm will find appreciative consideration at the Nizhni fair.

The French consul at Nizhni lays especial stress upon the necessity of bringing the manufacturer into direct contact with the Russian purchaser.

JOHN C. COVERT,

LYONS, *February 5, 1899.*

Consul.

RUSSIAN PETROLEUM IN PORTUGAL.

The Kingdom of Portugal has had a treaty of commerce with Russia for some four years. The first importation of petroleum into this country from Russian firms took place about a month ago. Russian exporters have heretofore been unable to manufacture tins cheap enough for the transportation of the product, but it seems that this difficulty has been overcome. The oil is now arriving in

tins of the same size and shape as those used by United States manufacturers.

Russian tank ships would have brought petroleum to this market long ago had there been facilities for receiving it in bulk. A firm here intends to build tanks to receive the oil direct from the vessels.

Our petroleum comes in barrels and tins, paying a duty of 60 reis per kilogram. Russian oil pays 52 reis per kilogram. According to the present exchange, 1,000 reis are equivalent to 72 cents, which would make the duty on the American product 4.3 cents, and on the Russian 3.7 cents. Consumers say that the Russian oil equals the American in quality. The imports of our petroleum through the port of Lisbon in 1898 amounted to 6,547,420 kilograms (14,434,442 pounds), and through the port of Oporto, 10,912,365 kilograms (24,057,400 pounds). Since the arrival of the Russian kerosene, the holders of large quantities of American oil have reduced their prices 10 cents per tin, or 20 cents per case. The introduction of Russian oil will seriously injure our trade in this important line.

J. H. THIERIOT,

LISBON, *February 21, 1899.*

Consul.

REPORT OF HAMBURG CHAMBER OF COMMERCE.

Under date of January 28, 1899, Consul Pitcairn sends from Hamburg extracts from the annual report of the chamber of commerce which bear upon United States trade, as follows:

SAN JOSÉ SCALE.

After the local police board, on January 30, had inhibited the importation of fresh American apples, an imperial message was published on February 5* which prohibited the importation from America of living plants and fresh plant waste, of old plant packing material, and of fresh fruit and fruit waste, if upon examination at the port of importation the presence of the San José scale was proven. This message caused great consternation among parties concerned; happily, it had been published at a period when the importations had practically ceased. Proper arrangements for scientific investigations were made at once, and fruit taken from different baskets of each separate shipment was examined. If only one of the insects is found in one of the sample baskets, the whole shipment is refused. Now, the custom-house inspectors have been instructed that all shipments after examination should be stamped "Declaration Bureau, Hamburg," which, of course, is quite a good measure, as it will be easy for anyone to detect at once whether the baskets have been examined or not. We have sent a petition to our Government with the request to instruct all custom-house authorities to admit in future all goods so stamped without further inspection, thus avoiding all delays. It appears superfluous, and it is a great inconvenience to everyone connected with the trade, that, notwithstanding the stamping of each package, a certificate of inspection is required.

*See CONSULAR REPORTS No. 210 (March, 1898), p. 377.

The next season again being in view, it was necessary to make arrangements for better quay facilities, the examination of the fruit requiring much room. It was decided that the examination and consequently the discharging of fruit cargoes should be concentrated in one spot, and a fruit hall was built at the "Hansahöft," the construction being so much accelerated that it was ready at the beginning of the season—in November.

Of course, the authorities had the unquestionable right, and it has also been their duty, to prohibit the importation of fruit after the San José scale had once been found; but it is a remarkable fact that, although the existence of the San José scale has been known for years in America, and in 1896 and 1897 in all parts of the country in which fruit is cultivated laws were issued to lessen the pest, in Germany nothing whatever was heard of it. It is strange that the consuls, who are in the habit of sending lengthy reports upon all subjects of more or less interest to the chamber of commerce, did not touch this matter at all. It is therefore quite plain that the measures which were so suddenly taken came quite unexpectedly, and have caused material loss to a number of people. We must confess that the situation does not appear to be so very dangerous; in fact, that the rumors of danger have been much exaggerated. Many competent judges, experts in the trade, have given as their opinion that the spreading of the insect by way of the fruit itself is not at all likely, as the waste of fruit will very seldom come into contact with the plant itself. Then this insect, living on trees, is by no means so dangerous as the phylloxera, which exists under the earth and is thus at liberty to multiply itself and to destroy the plants unobserved by the human eye. This appears to be confirmed by the fact that, notwithstanding American fruit has been imported for years on a large scale, careful examination of the plants has not brought to light one single specimen of the much-feared insect. Under these circumstances, we question whether the rigid examination of the fruit shipments, which is the cause of considerable delay and involves heavy expenses, is advisable. Besides, the examination of samples offers no perfect and absolute safeguard.

In March, the Prussian Minister of Finances published a message, ordering the examination of all fruit-waste importations for the Rhine district for the use of the jelly manufactories. Although fruit is imported duty free, the fruit waste is taxed 4 marks per 100 kilograms (95 cents per 220.46 pounds), and therefore the chambers of commerce of that district recommended the reduction of these importations to the greatest possible extent.

Soon after, a far more important message was published, ordering the examination of all unpeeled dried American fruit, unless it be so dry that it can be easily powdered by rubbing it between the hands. The "powdering-by-hands" clause is meaningless, as fruit dried to such an extent does not exist. The regulation could not be based upon the imperial message of February 5, which has reference to fresh fruit only, and we fail to see that it should have any right to exist at all. The danger that the San José scale might be brought to our fruit plantations by the medium of dried fruits appears very small, and we have received information from experts in California (where the fruit is dried) that it is very unlikely that scales would ever be found on dried fruit. We have sent a petition to our Government with the request to withdraw this regulation, and with regard to dried prunes the regulation has been withdrawn.

INSPECTION OF MEAT.

In suspecting the foreign-meat importations, and especially the American meat, and, further, in suspecting the American authorities, as frequently trichinæ have been found here in meats which are claimed to have been inspected before shipping, we can only say that much injustice has been committed. The fact that a

number of trichinæ sicknesses have occurred after the consumption of pork which has been properly inspected here, proves plainly that the accusations against the American inspectors of butchers' meat are unjust, and only serves to confirm the theory that "trichinæ inspections represent only problematic protection." Another fact (and we may call it a fact, no one as yet having succeeded in proving the contrary) is that in Germany not one case of trichinæ poisoning after the consumption of American pork has occurred, and that after Germany again allowed the importation of American pork, the cases of trichinæ poisoning have not increased. This also proves that the trichinæ become harmless after the salting and other preparation of the meat. As to "canned meats," this method of preserving requires such boiling as to render all morbid matter absolutely innocuous.

COMPETITION OF THE UNITED STATES.

Last year's crop of agricultural products in the United States (grain and cotton) has been very favorable, and business is fair. However, a constant decrease of importations has been noticed, in consequence of the protective system of the Dingley tariff. No doubt, this tariff is a great support to many articles made in America. The reason for the strength of American industry is to be found in the fact of its capacity for the production on a large scale of certain articles to which the German facilities, with only a few exceptions, are far inferior. The European industry may be prepared for the fact that in many articles which have hitherto been imported from Europe, the United States will become a sharp competitor; particularly the American iron and steel industry, supported by the great syndicates, is making every preparation to gain solid footing in Europe.

SHOE LASTS IN GERMANY.

In compliance with special instructions from the Department of State,* I have to report that the duty on shoe lasts imported into Germany is at the rate of 10 marks (\$2.38) per 100 kilograms (220.46 pounds). There are two principal last manufacturers in this country—Mr. C. Behrens, whose works are at Alfeld, near Hanover, and W. Roeser, of Erfurt, in Thuringia. Both these establishments are equipped with the latest and most improved American machinery, and the material principally used is the hard, cross-grained beech wood (Buchenholz), which grows in many parts of the Empire and is not only well adapted to machine work, but is dense and firm in grain and susceptible of a smooth and high finish.

Practically, all lasts used in this country, either for hand or machine shoe making, are made in Germany, and I have seen a full line of lasts made by Mr. Behrens for use on the machines of the Goodyear Shoe Machinery Company which, to all appearance, were equal in quality to the lasts of American manufacturers, after which they had been modeled.

* Sent, under date of January 23, 1899, at the request of an Ohio firm, to whom Advance Sheets of the report have been forwarded.

Both the manufacturers above named are in close communication with American sources, from which they obtain sample lasts of the latest patterns, and these are used as models, with such variation in form as the prevailing style in Germany may require. In respect to form, the lasts and the shoes made thereon for the German trade are usually at least one season behind those which are in demand in the United States; but changes of style in shoes are here, as in Great Britain, much less frequent and extreme than is common in America. This gives a permanence and stability to the domestic shoe manufacture and trade that is lacking in the United States, and not only protects dealers from the necessity of closing out at a loss shoes which are not of the latest model, but renders the work of the last makers comparatively simple and easy.

For the reason that a shoe last is not an invention which can be protected by patent or trade-mark, and because any newly imported model which should prove popular would inevitably be promptly and successfully copied, it would not seem probable that there is, in this connection, any important market for lasts of foreign manufacture. If such an opportunity ever existed, it was filled mainly by importations from Great Britain, but it is now apparently past, and the field, in the opinion of those competent to judge, would be limited to small and uncertain orders.

BERLIN, *February 9, 1899.*

FRANK H. MASON,
Consul-General.

COLORING OF TOYS AND CANDY IN GERMANY.

I give below a translation of an article published in the *Magdeburger Zeitung*, January 23, 1899, in which the Berlin correspondent of that paper informs its readers as follows:

In enforcing the law pertaining to the use of poisonous colors, the police ordered the chemical analyses of twenty samples of toys and thirty samples of confectionery. At this examination, it was found that thirteen of the twenty toys and ten of the thirty samples of confectionery contained questionable coloring matter. In most of the cases, poisonous lead colors had been used, which, it is stated, could as well have been replaced by other colors of a nonpoisonous nature. In some cases, it was ascertained that zinc, mixed with other colors, had been used as a covering color for marchpane, and other samples showed that tissue paper colored with the poisonous chrome yellow had been utilized for the ornamentation of the confectionery. This paper seems also to be used to a considerable extent in the manufacture of artificial flowers, though in this industry also a more harmless substitute could be used. A singular observation was made in the fact that in one box was found confectionery colored in various tints of very little difference, yet some of these tints contained poisonous, while others contained entirely harmless, coloring

matter. This would convey the impression that objectionable articles of an older manufacture had been packed together with articles manufactured recently and in accordance with the law.

It is notorious that no other nation exercises a more scrupulous inspection in the interest of the public health than does the German. No insect, however evasive and infinitesimal; no danger, however unknown and invisible; no noxious air, however imperceptible—can possibly escape the ever-vigilant German expert.

HENRY W. DIEDERICH,

MAGDEBURG, *January 23, 1899.*

Consul.

GOVERNMENT AID TO THE EXPORT TRADE OF GERMANY.

The German Government fully appreciates the value of a good, permanent consular service. The increasing support lent by the Imperial Government to commercial enterprise finds expression in the estimates and in the growing demands for the consular service. Additional secretaries are to be appointed to the legations at Mexico, Pekin, and to the embassy at Washington. To the embassy at St. Petersburg, experts in agriculture and forestry are to be appointed, in view of the importance of the Siberian Railway. New consulates are to be established at Bahia, Santa Catarina, Curitiba, Hankau, São Paulo, and Prague. Sixty thousand marks (\$14,000) are demanded for the sending of commercial experts to the United States, South America, and Turkey.

These items, insignificant as they may seem from a financial point of view, prove conclusively with what keen attention the German Foreign Office is watching and supporting German commerce abroad.

Without neglecting agriculture at home, the German Government is making commercial interests more and more the basis of its foreign policy. On the continent of Europe, perhaps, that policy, to a certain extent, is influenced by Germany's territorial relations; but, apart from this consideration, German export trade forms the center of gravity of almost every political transaction, and every encouragement is being given to it by the Imperial German Government.

JNO. F. WINTER,

ANNABERG, *January 18, 1899.*

Consul.

CLOTH PRESSING BY ELECTRICITY.

At a recent meeting of the Industrial Society of Elbeuf, a report was made by Mr. Ch. Mouchel on a new process invented by Mr. Chedville, which is known as the "electro-calidor" process and consists of pressing cloth by means of boards heated by electricity.

A special committee appointed for the purpose examined the manufacture and operation of the press boards. The result is declared to be most satisfactory, and the report is as follows:

The body of the press board is composed of asbestos paste covered by a netting of German silver. This is again covered by paper pulp, which gives a pliable surface without materially increasing the thickness of the press board, which measures from 2 to 4 millimeters (0.078 to 0.157 inch). The first experiments were made by applying the electric current through holes pierced in the portion of the board projecting beyond the cloth. Experience, however, has led to the adoption of press boards with a trapezoid projection, of which the two obtuse angles are covered with copper. Spring clips, provided with a metal connection and attached to a pliable conductor, serve to transmit the electric current to the copper-covered corners of the boards, when the press is arranged for work.

The electric press boards are used in the following manner: On a plate of sheet iron is placed a piece of cloth, between the folds of which are placed at equal distances three electric press boards; then there is another plate of sheet iron, another piece of cloth, and so on until the press is full. An ordinary press holds eight pieces, the folds of the cloth being 1 meter (1.09 yards) wide.

The Messrs. Blin employ a system of hollow presses, and an iron track, sufficiently long to accommodate ten, communicates with each one of their hydraulic presses. Against the ceiling and parallel with this track are arranged two conductors, one positive and one negative. They are placed on either side and a little beyond the line of the track. Large clips for transmitting the electric current are attached by pliable wires to these conductors. The hollow press is then placed between two of these clips, each of which communicates with a movable vertical distributor.

The distributor is a simple grooved rod, the conductor being placed in the groove. Thirty pliable wires, each terminating in a spring clip, hang at an equal distance from this distributor.

The clips are readily adjusted to the metal corners of the electric press boards, the positive on one side and the negative on the other. The current is thus established and the proper degree of heat generated, the time necessary varying from three-fourths of an hour to one hour and a half.

The required current for a press board measuring 1 meter (1.09 yards) by 70 centimeters (27.5 inches) is 2 amperes under a pressure of 110 volts. A press of eight pieces, with twenty-four press boards, demands a current of 48 amperes to heat the press, and the amount of electric force expended in one hour and a half is as follows: $48 \times 110 \times 1.5 = 7,920$ watts per hour. The mechanical force given a dynamo of 90 per cent working capacity is $\frac{48 \times 110}{736 \times 0.9} = 12.5$ horsepower. The labor expended in one hour and a half is as follows: $12.5 \times 1.5 = 18.75$ horsepower per hour.

Supposing a consumption of 1.5 kilograms of coal per horsepower per hour, the quantity of coal necessary to heat a press may be estimated at about 30 kilograms (66 pounds). Estimating coal at 25 francs (\$4.83) per ton, the maximum cost of heating a press would then be 75 centimes (14 cents).

Comparison being made between the amount of coal required by the new system of pressing and the old—viz, direct heating in a special oven by means of sheet-iron plates interspersed between the folds of the cloth—it is found that the old method is slightly dearer than the new, as the Messrs. Blin, who used the old system with as little waste as possible and had thirty presses per day, state that they used at least a ton of coal a day for the heating of their plates, which involved an expenditure of 33 francs (\$6.37) for the presses used, or 1.10 francs (21 cents) per press.

There is thus an economy of fuel, but the new system has other and more important points of superiority.

The first is the perfection of the work. The heating of each press, and even of each piece, can be regulated mathematically, either by varying the number of press boards or by increasing or diminishing the length of the heating. The cloth is heated slowly and without the inequalities resulting from the old system, under which the two ends of each piece were almost in contact with plates heated to 500°. All manufacturers who have employed the new system speak of this point as a great advantage.

A second advantage is the extreme cleanliness with which the pressing can be effected. The old style of plates heated in an oven often resulted in soiling the cloth, which is now entirely avoided.

Another advantage is the economy in laborious handling necessitated by heating and transporting heavy cast-iron plates. The workshops can also be kept at a lower temperature, more favorable to the health of operators.

The heat generated in the folds of the cloth is completely utilized by the new process, and a fraction less is lost by radiation than under the old system of heating by plates.

If there is already an electric plant in the establishment (and few modern houses devoted to commerce or manufacture are without one), the expense is reduced. The boards are not costly, and with proper care will last several years.

Mr. Mouchel thinks that the process above described is, from all points of view, a most important invention and should be generally adopted.

W. P. ATWELL,
Commercial Agent.

ROUBAIX, *January 18, 1899.*

MARKETS IN PARIS.

In answer to inquiries from a Western university,* Consul-General Gowdy writes from Paris, under date of February 9, 1899:

The "Halles Centrales" of Paris, the great distributing point for eatables in this city, is an outgrowth of a grain market established in the eleventh century by Louis VI, and since that epoch has been from time to time increased and its extent and functions so enlarged

*Advance Sheets have been sent the correspondent.

that at the present day it consists of ten pavilions, having a surface of 25,272 square meters and uncovered space of 9,045 square meters, making a total of 34,317 square meters (365,202 square feet). Three entire pavilions and three half pavilions are devoted to the wholesale trade of meat, poultry, game, tripe, fish, oysters, butter, eggs, and cheese. The remainder of the covered space is devoted to the retail trade.

The outside spaces are occupied by the fruit and vegetable dealers. The merchandise sold in the pavilions comes from the adjacent departments (or counties), Algeria, and the colonies. The open space is occupied by the merchandise from the Department of the Seine and surrounding district, delivery of which is made by carts arriving at all hours of the night up to the time the sales take place. The sales are either through private agreement or by auction, the hours varying according to the season of the year and the nature of the merchandise.

The management of the Halles pertains to the préfet de la Seine, but is under the immediate surveillance and control of the préfet de police of the city of Paris. The sales are conducted by persons called the representatives of shippers, appointed by the préfecture de police, thus avoiding the commission or middle man. The books and records of such sales are always subject to the inspection of the proper authorities. It is evident that sales accomplished in this manner are not only of benefit to the producer, but to the consumer. I may say that in the neighborhood of the Halles there are many commission houses, and, in fact, it is there that they principally congregate, though their business is absolutely independent from that of the public market. They are apparently prosperous, as a rule, and nothing prevents their purchasing on their own account from the auction sales or receiving on consignment from producers.

There is a system of caves under the entire surface of the Halles Centrales, specially arranged for the care of the products sold immediately above.

The sanitary regulations are most strict, the cleaning and disinfecting being carried out in a perfect manner. There is an efficient staff of inspectors to examine all arrivals of merchandise at the Halles, and that which is considered unfit for sale is immediately seized and condemned.

In addition to the Halles Centrales, there are scores of markets, both covered and open, as well as temporary markets taking place in fixed localities on certain days in the week throughout Paris. In many cases, the stalls of these markets are supplied with goods originally purchased at the Halles Centrales.

THE PAVEMENTS OF PARIS.

In reply to a correspondent,* Consul-General Gowdy, of Paris, under date of February 14, 1899, writes as follows:

The paving of the Paris streets and boulevards dates as far back as the end of the twelfth century. In the year 1184, Philippe Auguste commenced replacing the beaten ground by stone paving. The localities first treated were the square of the Chatelet, the routes of St. Antoine, St. Jacques, St. Honoré, and St. Denis. It is considered that the department of streets and alleys, as we would designate it in the United States, is one of the most important services in the city administration.

The streets of the city of Paris are supplied with four different classes of paving, viz, stone, macadam, asphalt, and wood. There are some streets still remaining of ordinary earth composition, but they were originally the property of individuals and are fast being replaced by other compositions, as they come under the control of the municipal authorities.

On January 1, 1896, the total amount of stone paving was 1,410,300 square meters (1,686,719 square yards); in 1897, 1,396,400 square meters (1,670,094 square yards). The decrease between the years was accounted for by the replacing of stone paving by wood.

In 1896, the total surface of asphalt paving was 357,650 square meters (427,749 square yards); in 1897, 372,950 square meters (446,048 square yards)—an increase of 15,300 square meters (18,299 square yards).

In January, 1896, the total surface of wooden paving was 907,400 square meters (1,085,250 square yards); in 1897, 1,120,000 square meters (1,339,520 square yards).

On January 1, 1896, the total surface of earth roads was 40,750 square meters (48,737 square yards); in 1897, 40,500 square meters (48,438 square yards).

Comparison of pavements.

Nature of paving.	When laid down.	Cost per square meter.†		Cost of maintenance.		Average duration.
		<i>Francs.</i>		<i>Francs.</i>		<i>Years.</i>
Stone.....	Undetermined.....	18.00	\$3.47	0.74	\$0.14	30
Macadam	do	6.00	1.16	2.55	.49	5
Asphalt	1855.....	16.50	3.18	1.30	.25	15
Wood.....	1881.....	18.50	3.47	1.50	.29	8

* To whom Advance Sheets have been sent.

† 39.37 inches.

The paving stones are generally in block form, 16, 18, or 20 centimeters (6, 7, or 7.9 inches) high, of hard stone. Paving blocks of porphyry are not used now, being considered too slippery. The cost of putting down this paving includes the sand bed, from 15 to 20 centimeters (5.9 to 7.9 inches) thick. Its great fault is the noise it produces. It was estimated that up to 1897, the stone paving of Paris had cost the city 110,484,000 francs (\$21,323,412).

Macadam.—The cost of cleaning and watering is included in the price of maintenance of this paving. The cost quoted is for a depth of broken stones of 35 centimeters (13.7 inches), reduced to 30 centimeters (11.8 inches) by the rolling cylinders.

The macadam paving had cost the city of Paris, up to 1897, the sum of 6,448,750 francs (\$1,244,607).

Asphalt.—These roads have a foundation 15 centimeters (5.9 inches) thick of mortar, called "béton," composed of lime, sand, gravel and water, and broken stones, over which is placed the layer of asphalt 5 centimeters (1.9 inches) thick after compression. The asphalt used in Paris comes from Ragusa (Sicily), de Mons (Department du Nord), and Val-Traverse (Switzerland). The asphalt, having been reduced to powder by the action of heat, is transported while warm to the roadway, beaten down with hot metal stampers, and afterwards subjected to the cylinder rolling.

The principal advantage of asphalt is that it produces no noise. The objectionable features are its slippery condition in wet weather, and that it can only be used in level streets. It is chiefly employed in narrow streets or where there is great traffic. Up to 1897, asphalt paving had cost the city 6,448,750 francs (\$1,244,609).

Wooden paving.—Wooden blocks 12 centimeters (4.7 inches) high and 15 centimeters (5.9 inches) long are placed upon a foundation of "béton," as described above. The blocks which have given the best results are from the pine trees of the Department of the Landes, and these are mostly used. However, on many of the main thoroughfares the pitch pine of Florida has been employed with marked success. Within a few years, trials have also been made with the hard exotic woods, such as the kauri and teak of Australia and Java, the liem of Anam, the stringy bark, etc.; but these trials have been of so recent a date that they can not be used for purposes of comparison. It is estimated that up to 1897, the wooden paving of Paris had cost the authorities 16,386,027 francs (\$3,162,503).

The maintenance department of the streets and alleys of Paris is composed of 396 agents, including 1 chief engineer, 8 ordinary engineers, and 387 assistants, with a pay roll of 1,350,261 francs (\$260,600) per annum.

The city spends for the maintenance of the streets, 12,644,592 francs

(\$2,440,406); for sidewalks and alleys, 2,009,611 francs (\$387,855); for cleaning the streets and alleys, 9,340,082 francs (\$1,802,635); making a total expenditure for streets and alleys of 23,994,285 francs (\$4,630,897). The figures, as above given, include the salaries of the maintenance force.

The number of permanent workmen is: For maintenance, 1,902; for cleaning, 3,694; total, 5,596.

ANTWERP IVORY MARKET.

At the first quarterly sale held on the 31st day of January, there were offered and sold as follows:

Kongo:	Pounds.
Hard.....	81, 780
Soft.....	5, 792
Angola.....	45, 823
Gaboon.....	2, 414
Abyssinian.....	1, 952
Senegal and Côte d'or.....	789
Total.....	138, 550

The totals for preceding years were:

	Pounds.
1898.....	125, 761
1897.....	131, 656
1896.....	145, 062
1895.....	135, 256
1894.....	82, 777
1893.....	107, 004
1892.....	56, 217
1891.....	55, 075
1890.....	26, 715

The prices paid showed an advance from 10 to 20 cents per kilogram (2.2046 pounds) for tusks of all weights, as well as tusks for bangles. For certain lots of scrivailles, the advance reached about 38 cents per kilogram (2.2046 pounds).

The tusks for heavy balls were the only ones which fell in price, and showed a falling off of about 19 cents from previous sales.

The stock on hand to-day amounts to 181,074 pounds, as compared with 81,750 pounds in 1898, 134,480 pounds in 1897, 268,520 pounds in 1896, 174,163 pounds in 1895, and 40,785 pounds in 1894.

The date for the next quarterly sale is fixed for the 2d of May.

GEO. F. LINCOLN,
Consul-General.

ANTWERP, February 7, 1899.

NEW WEAVING MACHINE IN GREAT BRITAIN.

The first public and technical description of an invention that is attracting acute attention in trade circles throughout this district was made recently at Leeds by Prof. Robert Beaumont, a brief report of which is inclosed, taken from the Nottingham Post of February 10.

NOTTINGHAM, *February 14, 1899.*

S. C. MCFARLAND,
Consul.

REVOLUTIONARY INVENTION IN WEAVING.

The textile lecture hall at the Yorkshire College, Leeds, was crowded last evening, when Prof. Roberts Beaumont delivered a lecture descriptive of the new tape loom which has been invented by Mr. John Poyser, of Wirksworth. The loom was exhibited in motion prior to the lecture.

Professor Beaumont noticed briefly at the outset the transition from the handloom to the power loom in the weaving industry and the developments of Cartwright's invention at subsequent periods. He discussed the negative characteristics of the Poyser loom, which he said he regarded as a revolutionary invention. It did not accomplish two of the most difficult points in power-loom weaving—the production of a variety of weave design and of a variety of weft coloring or shuttling. It was, again, for narrow fabrics, only an inch or so wide, such as tapes, ribbons, bindings, braids, and not for weaving pieces a yard or more in width. But it was so distinct in its principles of mechanism from anything hitherto attempted in automatic weaving that it was truly a new form, and not an old form of mechanism modernized and changed. No expert would have been daring enough to have attempted to place the shuttle containing the weft yarn behind the sleig or reed, and to divide the latter in two for the insertion of each pick of weft, which was one of the leading and distinctive features of the Poyser loom. In the general build, as in the details, of the Poyser loom there were evidences of a complete departure from the design of the ordinary loom. The old loom was 9 feet in height and $4\frac{1}{2}$ to 5 feet in breadth; the dimensions of the "Poyser" were, respectively, 2 feet 9 inches and 14 inches. Two of the most important motions in weaving were the take-up of the fabric and the let-off of the warp, and the value of the uniform action of these could not be overestimated. In the Poyser loom, they acted in unison, and were positive, and not negative, in action; the take-up mechanism automatically brought the let-off mechanism into play. They were also warp and weft stop motions, and if the warp broke or the weft yarn ran off, the loom was automatically thrown out of action. The new loom was easier to manipulate than the old, and it was so small that the operator might readily adjust any particular part of it. The speed of the old loom averaged 140 picks per minute, but the new loom might be run at 500 per minute, without additional wear and tear on the working parts or undue tension and friction upon the warp and weft yarns. In conclusion, Professor Beaumont said it was gratifying to know that a loom which might be an epoch-making one in the textile world was the invention of a fellow-countryman.

and from school to attend to their luggage, etc. Staff sergeants of the corps are sent to any part of the Continent or as travelers for business firms in the Kingdom. London alone is capable of employing 50,000 commissionnaires. The corps has a military organization, and members can live at the mess for 17s. (\$4.13) per week and pay all the ordinary corps charges, viz: Mess, 10s. 6d. (\$2.55); lodging, 3s. 6d. (85 cents); savings bank, 1s. (24 cents); clothing, sick and all other funds, 2s. (49 cents).

INTERDICTION OF CATTLE FAIRS IN BELGIUM.

The Belgian Senate has recently resumed discussion of the suppression of cattle marts and fairs. During the debate, a senator stated that official inquiries had failed to establish the presence of a diseased animal on the market, but that disease existed and had even increased since the interdiction. This statement was contested, and it was shown that aphthous stomatitis (inflammation of the mouth) had been carried into a commune by six pigs which had been exhibited at a mart, and that the commune at the present moment was infected throughout. The Minister of Agriculture expressed regret that he had not closed the market at Courtrai, which would have prevented the invasion of the disease in the stables of the distilleries of that arrondissement. Although the number of diseased cattle is reported as diminishing, the following statement shows the present state of the epidemic:

Arrondissement.	Communes.	Infected centers.
Antwerp.....	23	5
Brabant.....	78	150
East Flanders.....	22	23
West Flanders.....	6	35
Hainaut.....	60	92
Liege	47	63
Limbourg	35	70
Luxembourg.....	5	8
Province of Namur.....	18	19

BRUSSELS, *December 30, 1898.*

GEO. W. ROOSEVELT,
Consul.

VARNISH, ROPE, AND CANVAS IN PARAGUAY.

Probably, most of the varnish used here comes from the United States, but it does not come directly, appearing to go first either to England or Continental Europe, there to be reshipped to South America. The wholesale and retail price is \$1.35 gold per gallon. There is but little furniture in Paraguay that is not varnished.

It is to be hoped that United States varnish dealers will endeavor to establish direct communication with business houses in Asuncion, thus preserving the character of our goods as well as enhancing their reputation. I give below a few names of firms to whom dealers could write.

Manila rope also has a large sale here, coming indirectly from the United States. The class principally used (about the size of the middle finger) is sold for 12 or 15 cents gold per pound.

Twine is another United States article whose identity is lost, owing to its passing through foreign hands. Fishing is carried on very extensively. Twine is sold for 35 or 40 cents gold per pound; the cotton twine brings from 30 to 35 cents gold per pound; fishing lines, 30 cents gold per pound.

I would also call the attention of the American manufacturers to the favor in which their canvas is held. It is used for sails on the many small boats, canoes, etc., plying on the rivers and lakes; also for the large sailing vessels, and for domestic purposes, as cots for sleeping, etc. The poor people use the cot instead of the bed almost exclusively, the cost being about \$1.50 gold. Many of the rich in this warm country also use cots, as they are cooler.

The country from which this canvas chiefly comes is the United States, and the principal mark is "Extra Duck," sold here for \$1.60 paper (about 25 cents gold) per yard. This does not come directly from the United States, being handled, like the others, by foreign houses.

I again appeal to our manufacturers to establish a showroom for American goods, and also to deal direct with the Asuncion firms. The following persons would handle our goods: Enrique Plate, commercial agent and commission merchant; Christian Heiseke, Ruis y Jorba, Francisco Angalo y Cia, Gaona y Urrutia, Gomez y Cia, Trabucatti y Cia, Crobats y Rodi, Miguel Bajae. With the exception of Enrique Plate, who can be communicated with in English, I would recommend that all correspondence with the above firms be in Spanish, thus securing ready attention and replies.

Imports in 1897.

Articles.	Customs duties.	Total.		From Argentina.		From Uruguay.	
		Official value.	Quantity.	Official value.	Quantity.	Official value.	Quantity.
	<i>Per cent.</i>		<i>Kilos.</i>		<i>Kilos.</i>		<i>Kilos.</i>
Varnish.....	25	\$341	849	\$315	761	\$26	88
Manila rope.....	25	15,386	84,192	10,222	54,480	5,164	29,712
Twine	25	167	442	99	262	68	180

The above is the amount imported from Argentina and Uruguay. The official values are stated in gold.

J. N. RUFFIN,
Consul.

ASUNCION, *December 3, 1898.*

PROPOSED PARAGUAYAN-UNITED STATES BANK.

I have the honor to inclose an important communication from one of the leading citizens of this Republic, relative to the condition of United States trade with South America in general and Paraguay in particular, and to the establishment of a Paraguayan-United States bank. In addition to the establishment of the bank, but subsidiary thereto, Paraguay offers both opportunities and inducements to American capitalists for the development and installation of the following industries: (1) The building and operation of a railway from Igatimi to Rosario, 300 kilometers (186 miles), with guaranty of 6 per cent; (2) electric-light plant, waterworks, and sewerage for Asuncion; (3) factory for the production of oil (cocoa, castor, and mani); (4) factories for cotton goods and other textiles (carajuata and ramie); (5) china and earthen ware factory, the raw materials being at hand; (6) production of iron and manganese; (7) cultivation of indigo; (8) output of timber, especially ebony; (9) fish cannery.

In regard to the proposed bank, I may say that the Paraguayan Government will give it full encouragement and support; and I feel almost certain that in the building of the railroad mentioned, all the land which may be required will be freely given.

The proposed bank could take up the yerba mate trade by buying out the Paraguayan Industrial Company, which would enable it to constantly renew its metallic currency and make a handsome profit besides; it could build a railway, following a well-defined plan, which would connect Paraguay with Bolivia, and another which would bring Brazilian products into Paraguay. The establishment

of colonies along these lines of railway would result in increased income; the lands are rich and capable of producing the many and varied products of the country.

Cattle raising opens a vast field for the employment of capital, the profits of which may be calculated at from 20 to 25 per cent per annum. The number of cattle at present in Paraguay is estimated at 4,000,000, while its camps are capable of sustaining 50,000,000. The value of the cattle could be increased threefold by crossing with imported stock. From the superior quality of Paraguayan grass, it has been well established that its beef is superior even to that of Argentina.

A branch railway, starting from Rosario and running in the direction of Brazilian territory, by way of Igatimi, could count upon the very important traffic of the Paraguayan tea forests, and the transportation of the yerba of both countries, besides many other products not yet touched, such as timber, cacao, oranges (sweet and bitter), india rubber, etc.

Capital can find profitable investment in public works—port improvements, construction of docks, custom-house warehouses, buildings in Asuncion, electric lighting of cities and towns, etc.

Paraguay, in fine, offers every inducement to American capitalists for industrial and financial investments, and these should be investigated at once, and, if proven to be satisfactory, accepted before European capitalists monopolize the same.

JOHN N. RUFFIN,
Consul.

ASUNCION, *December 16, 1898.*

INTRODUCTORY REMARKS.

It is strange that the great Republic of the United States of North America, which you represent in this country, notwithstanding the prodigious development of its industries and its proverbial mercantile activity, does not enjoy the supremacy that it should in the commercial affairs of South America. I believe that this is owing to the difficulties that exist at the present time in transacting business between South American countries and the United States. There is no direct steam communication with the River Plata, nor is there a single bank in South America owned by North American capitalists, whereas there are many worked with European capital.

North American manufactures are introduced into these River Plata countries on a large scale through the medium of European markets, and the bank operations resulting therefrom are transacted by the same means, paying to Europe an enormous tribute that, if it does not render impossible the interchange, at least makes it very difficult.

A friend of mine, largely interested in this commerce, has tried to initiate direct business with the United States, but had to abandon the idea on account of the difficulty of remitting funds.

Paraguay, owing to its geographical situation, the fertility of its soil, and fine climate, is certain of a great future. Notwithstanding the deplorable fact that Paraguay—for causes not necessary to recite—was shut out from the rest of the world for almost a century, it accumulated sufficient means to sustain a gigantic war of five years against three allied powers, among them the first of South America.

Owing to causes to which it would be inopportune to refer, Paraguay has progressed very slowly in commerce and industries. We are now about to witness the transmission of the Presidency of this Republic to a citizen well prepared, of progressive ideas, full of the best intentions and of tried honor, and the time for action on the part of the commercial and financial agents of the great Republic of the north has arrived.

There are many ways in which to enter into commercial relations with this country, but I think that the way I propose is the most practicable and promises the surest result.

Paraguay is one of the boundaries of the richest part of the Argentine Republic—the River Plata countries have to pass it to arrive at the rich Brazilian State of Matto Grosso—and possesses, in the great Chaco, the key of the principal and easiest entry to the rich Republic of Bolivia.

A bank started in the manner I propose would begin with a small capital, but would almost immediately increase it, because it would have to be the commercial agent of a vast territory. I believe that it will be easy to arrange with the public authorities for the bank charter in the form I propose, or perhaps with slight modifications; for it is easy to conceive the immense future of an establishment that would produce activity in all commercial operations and industries in Paraguay and that would insure important benefits to its initiators.

The man who will shortly direct the destinies of this country inspires general confidence, and evidence is not wanting to show that Europeans are willing to enter into business relations with Paraguay in the new era about to commence; and if the capitalists of the United States desire to control the future of this portion of the continent, they should act at once.

Should my suggestions, Mr. Consul, be received favorably by American financiers, it will give me the greatest pleasure to enter at once into negotiations with the Government on this important business.

* * *

ASUNCION, *November, 1898.*

PROJET OF THE BANCO DEL PARAGUAY Y NORTE AMERICA.

(1) The representative of a syndicate of capitalists is to make a loan to the Government of the Republic of Paraguay of, say, \$1,000,000 gold, with an amortization of 2 per cent and 4 per cent interest per annum.

(2) The Paraguayan Government to guarantee the payment of the amortization and interest with all its revenues and the goods belonging to the nation, and more especially with the net product of the house and land tax (*contribucion directa**), the land-tax law guaranteed not to be annulled or altered until such time as the debt be extinguished; the expenses of the collection of the tax not to exceed \$70,000 paper currency per year.

(3) The syndicate to be authorized to form an anonymous company to establish

* A copy of the house and land tax law accompanied Consul Ruffin's report and is filed in the Bureau of Foreign Commerce.

a bank to be called the "Banco del Paraguay y Norte America," to be domiciled in the city of Asuncion del Paraguay; the bank to be authorized to establish branch banks and agencies wherever it may consider necessary, both in Paraguay and without.

(4) The capital of the bank to be \$2,000,000 gold, divided into 20,000 shares of \$100 each, of which the Government of the Republic of Paraguay should take 10,000, to be paid for by the revenues referred to in article 1, the remaining 10,000 shares to be taken up by the company to be organized.

(5) The gains proceeding to the Government from banking operations to remain as a subsidy to the service of the loan.

(6) The shares being subscribed for and paid up, the Government of the Republic of Paraguay to deliver to the syndicate the corresponding titles of the public debt, having previously deposited in the treasury the total amount of the 20,000 shares. On this occasion, the Government will receive the 10,000 shares.

(7) The gains of the bank will be divided as follows: To the Government for the concession of the bank charter, 5 per cent; to the directors, according to their assistance at sessions, 5 per cent; to the shareholders, 90 per cent.

(8) The directory of the bank to consist of five directors and three vice-directors, of which three directors and two vice-directors would be elected by the shareholders and two directors and one vice-director by the Government, with the authorization of Congress. The president and manager of the bank will be elected by the directory.

(9) To be elected director by the assembly, it is necessary to hold at least 200 shares, which must be deposited in the bank and can not be disposed of while the office of director is held.

(10) The directors elected by the Government need not be shareholders.

(11) The provisional directory will be formed by the syndicate, and their duties will be limited to the formation of the statutes of the bank, subject to the approbation of the Executive, to open the share list to subscribers of the 10,000 shares, and receive the funds, which will be deposited provisionally in some establishment of credit, with the concurrence of the Government, until such time as the "Banco del Paraguay y Norte America" shall be opened.

(12) The Government of Paraguay to have a vote at the meeting of shareholders, as the statutes may determine.

(13) The bank to be authorized to emit, as much as three times its paid-up capital, notes payable to bearer at sight, in gold, under the obligation of holding gold equal to the third part of its notes in circulation, and the remaining two-thirds in documents guaranteed payable within six months.

(14) The bank to be authorized to make the following operations: To discount bills of exchange and promissory notes; to open current accounts; to receive and accept bills of exchange and buy and sell drafts; to make advances on bills of sale and enter into all classes of banking operations.

(15) The bank shares not to be transferable. The bank not to acquire houses or lands outside of what is necessary for bank offices.

(16) The Government to name an inspector empowered to examine the operations of the bank, sign all notes put into circulation, and examine the balances of the operations of the bank. The salary of the inspector to be paid by the bank.

(17) The bank to open a department for mortgage operations, in which not more than 25 per cent of its capital can be invested.

(18) The loans on mortgage not to exceed 50 per cent of the value of the object mortgaged, calculated on the valuation placed upon it by the house and land tax office, and the estimate of the directory.

(19) In order to formalize the contract of the mortgage, the party interested will

present his title to the property to the directory, the certificate of the accountant-general of the (Government) mortgage office, by which the property should be certified to be free of any claims or other mortgage, and the receipt of payment of the tax for the last six months issued by the house and land tax office. The mortgage contract to be private and according to the form resolved upon by the directory. On the contract being concluded, it will be presented in the (Government) mortgage office, to be noted without further formality. For the cancellation of the mortgage, a notice addressed to the accountant-general of the mortgage office, requesting him to make the entry according to law, will be sufficient.

(20) If sixty days after becoming due the mortgage is not paid, the bank, without form of law, shall be free to sell the property by auction to the highest bidder, it having previously been advertised in the papers for thirty days. The president of the bank or his representative will sign the documents of sale, and after the liquidation of the capital, interest, and expenses, the balance will be handed over to the mortgagee.

(21) The bank, its branches and agencies, to be relieved from payment of all Government or municipal taxes, direct or indirect; also of stamped paper, or duties of any other nature whatsoever, there being included in this concession the charter, bank shares, income derived from them, bank notes, bills of exchange, policies, and all other documents. Iron safes, articles of office use necessary to the establishment, paper, printed forms, books, and furniture for its use and that of its branches and agencies to be admitted free of duty.

(22) The bank to publish every three months or more frequently, a *précis* of its operations.

(23) The bank to have the exclusive right to emit all gold notes of less than \$1, its notes to be received by all the public offices of the administration and to serve to cancel all gold obligations, or obligations in paper currency at the rate of exchange of the day when due.

(24) The Government of the Republic to have the right to draw upon the bank for 10 per cent of the paid-up capital, at dates to be agreed upon, depositing as guaranty the shares held by it and which should amount to at least twice the value of the sum drawn.

(25) The bank to accord to the Agricultural Bank, for the purpose of its creation (loans to agriculturists), loans on the mortgages effected by said bank and the Government of the Republic to lend its subsidiary guaranty.

(26) The "Banco del Paraguay y Norte America" to enjoy for its credits the same privileges accorded to the Government.

(27) The funds received by the house and land tax office destined to the service of the loan, to be deposited monthly in the "Banco del Paraguay y Norte America." At the end of each year, this account will be liquidated to pay the interest and amortization of the loan. If by any circumstance the sums received should not be sufficient for the service of the loan, the amount to be completed from the profits of the bank under the control of the Government, and even from the general revenues of the nation if necessary.

(28) If a balance in favor of the Government should result from the receipt of the tax, the amount to be placed at the orders of the Government in account current.

(29) If in the course of the bank's operations, 75 per cent of the actual emission of notes should be recovered, the bank will collect directly from the respective offices the funds destined to the amortization of the same, and the "caja de conversion" will cease and be substituted by the bank, until the entire extinction of the paper currency.

(30) The Government to be prohibited from emitting notes of paper currency after the establishment of the "Banco del Paraguay y Norte America," and from

diminishing the revenue destined to the amortization of the notes actually in circulation.

(31) The bank charter to remain in force until the payment of the loan treated of in article 1.

(32) The bank can augment its capital when the assembly of shareholders resolve to do so, with the concurrence of the Government of Paraguay, which will have the right to subscribe half of the shares issued for this purpose.

CATTLE IN URUGUAY.

Cattle are an important part of the wealth of Uruguay. The following is a statement of the movement of the stock yards of Montevideo for the year 1898:

The number brought into the stock yards was:

	Head.
By railway (4,442 cars).....	94, 879
In droves.....	281, 189
Total.....	376, 068

Classification:

Steers.....	227, 193
Cows.....	129, 070
Oxen.....	11, 751
Calves.....	8, 054
Total.....	376, 068

Destination:

For slaughterhouses.....	219, 124
For local meat supply.....	88, 738
For interior.....	68, 206
Total.....	376, 068

These cattle were brought from the following places, which cover all the departments of the Republic.

From—	Head.	From—	Head.
Florida.....	64, 559	Treinta y Tres.....	9, 902
Durazuo.....	28, 362	Canelones.....	30, 015
Paysandu.....	13, 510	Rocha.....	5, 426
Minas.....	20, 438	Salto.....	6, 785
Tacuarembó.....	14, 413	Rio Negro.....	16, 387
Soriano.....	56, 156	Rivera.....	265
San José.....	54, 434	Montevideo.....	14, 568
Cerro Largo.....	5, 899	Artigas.....	540
Maldonado.....	7, 646	Total.....	376, 068
Colonia.....	13, 456		
Flores.....	13, 306		

The killing on the River Plata, which includes Argentina and Rio Grande do Sul (Brazil), is officially given in this résumé:

Description.	1899.	1898.	1897.	1896.
Argentine Republic:	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>
Buenos Ayres.....	41,000	52,500	119,100	74,300
Entre Rios.....	5,500	2,300	21,000	5,100
Uruguay:				
Uruguay River.....	38,500	38,000	68,000	73,700
Montevideo.....	131,900	76,000	144,000	113,800
State of Rio Grande (Brazil).....	10,000	18,000	55,000	.....
Total	226,900	186,800	407,100	266,900
For extract of beef.....	3,600	1,500	.....	27,000
For tasajo (jerked beef).....	223,300	185,300	407,100	239,900

ALBERT W. SWALM,

MONTEVIDEO, *January 21, 1899.*

Consul.

COTTON GOODS IN ECUADOR.

The following information was sent by Consul-General De Leon, of Guayaquil, under date of January 18, 1899, in answer to inquiries by the Philadelphia Museums.* Mr. De Leon says:

I am pleased to find that our merchants are realizing the fact that to develop a trade in any particular line in foreign countries they must meet the requirements of the buyer and be prepared to sell him what his custom requires, and not what we think he should require. The information I have obtained comes from one of the leading houses of this city. I trust that our merchants may secure a fair share of the cotton-goods business of Ecuador, which at present is controlled by Europe. I confess that I have little hope of seeing United States manufactures sold to any great extent on this coast until we have an isthmian canal. At present, business is handicapped by the excessive rates charged by the steamship line—double, and in some cases treble, those from Europe. When the railroad now in course of construction from San José, Costa Rica, to the Pacific is completed, the rates may be reduced.

* Advance Sheets of the report have been forwarded.

List of cotton goods mostly sold in Ecuador.

Spanish name used here.	English name.	Length. Yards.	Width. Inches.	Price.	Quality.
Guinga split.....	Oxfords	40	20 to 21	1½d. to 1½d. (2.4 to 2.5 cents) per yard...	Ordinary.
Guinga	do	40	24 to 26	1½d. to 1½d. (2.9 to 3 cents) per yard...	Do.
Do.....	do	40	25 to 26	1½d. to 1½d. (3.9 to 4.4 cents) per yard...	Do.
Zafiro split.....	Zephyr oxfords.....	40	20 to 21½	1½d. (2.5 cents) per yard.....	Do.
Zafiro.....	do	40	26 to 27	2½d. to 2½d. (4.4 to 4.5 cents) per yard...	Do.
Pueblas	Regattas	40	24	1½d. (3 cents) per yard.....	Do.
Do.....	do	40	24½ to 25	2d. to 2½d. (4 to 4.5 cents) per yard.....	Do.
Do.....	do	40	26	2½d. to 3d. (5.8 to 6 cents) per yard.....	Medium.
Do.....	do	40	26 to 27	3½d. (7 cents) per yard.....	Do.
Do.....	do	40	24	1½d. (3.04 cents) per yard.....	Ordinary.
Sempterno	Denims	40	24	2½d. to 2½d. (4.4 to 4.5 cents) per yard...	Medium.
Do.....	do	40	26	2½d. to 3d. (5.9 to 6 cents) per yard.....	Do.
Do.....	do	40	27	9½ cents a. g. (discount 2½ per cent) per yard, 9 ounces.	Do.
Sempterno Americano.....	do	45 to 60	27	8 cents a. g. (discount 2½ per cent) per yard.	Do.
Duradera (diablo fuerte).....	Indigo-blue drillings.....	40	24	2½d. to 2½d. (4.3 to 4.5 cents) per yard...	Do.
Duradera Americana.....	do	45 to 60	27	8 cents a. g. (discount 2½ per cent) per yard.	Do.
Francia fondo color estampada diversos colores.....	do	60	20 to 21	1½d. (2.5 cents) per yard.....	Ordinary.
Francia fondo blanco estampada fistas de colore.....	do	40	27	1½d. to 1½d. (3.5 to 3.7 cents) per yard...	Do.
Licuzos.....	Gray domestics (drills).....	40	24	3a. 2½d. to 3s. 9d. (78 to 91 cents) per piece.	Do.
Do.....	do	40	28	4s. 1d. to 4s. 8d. (99 cents to \$1.135) per piece.	Do.
Licuzos Asargados.....	do	40	30	3½ cents (U. S. currency) per yard.....	Do.
Do.....	do	40	26 to 27	5s. 2d. (\$1.257) per piece.....	Do.
Ruanes	Whites	40	25	3a. 8d. (89 cents) per piece.....	Do.
Do.....	do	40	28	4s. (97 cents) per piece.....	Do.
Do.....	do	40	30	do	Do.
Do.....	do	40	33	5s. 9d. to 6s. (\$1.398 to \$1.46) per piece...	Medium.
Do.....	do	40	35	6s. 1½d. to 6s. 4d. (\$1.49 to \$1.54) per piece.	Do.
Do.....	do	40	35	7s. 8d. (\$1.87) per piece.....	Do.
Ruanes Grueso.....	Whites, thick.....	40	33	6s. 11d. (\$1.68) per piece.....	Do.
Sanas.....	Calico	40	33	.....	Do.

List of cotton goods mostly sold in Ecuador—Continued.

Spanish name used here.	English name.	Length.	Width.	Price.	Quality.
Sanas.....	Calico.....	<i>Yards.</i> 40	<i>Inches.</i> 28	5s. 4d. (\$1.30) per piece.....	Medium.
Do.....	do.....	40	28	1½d. (3.4 cents) per yard.....	Do.
Zaraza split: Fondo blanco— Camisa.....	Prints (shirting).....	60	20½ to 21	1½d. (2.1 cents) per yard.....	Very ordinary, with much starch.
Traje.....	Prints (big designs).....	60	20½ to 21	1½d. (2.28 cents) per yard.....	Do.
Fondo color— Camisa.....	.....	60	20½ to 21	1½d. (2.4 cents) per yard.....	Do.
Traje.....	.....	60	20½ to 21	1½d. to 1¾d. (2.4 to 2.5 cents) per yard..	Do.
Zaraza ancha: Fondo blanco— Camisa.....	.....	24, 32, 50, and 65	28 to 30	2d. (4 cents) per yard.....	Medium.
Traje.....	.....	24, 32, 50, and 65	28 to 30	2d. to 2½d. (4 to 4.4 cents) per yard.....	Do.
Fondo color— Camisa.....	.....	24, 32, 50, and 55	28 to 30	2½d. to 2¾d. (4.3 to 4.5 cents) per yard.....	Do.
Traje.....	.....	24, 32, 50, and 55	28 to 30	do.....	Do.
Zaraza negra.....	Black prints.....	30	29 to 30	5s. to 5s. 2d. (\$1.22 to \$1.257) per piece..	Medium, soft finish.
Splits.....	Black prints (narrow).....	30	20½ to 21	2s. 8½d. (55.8 cents) per piece.....	Ordinary, without starch, soft finish.
Zaraza para cama.....	For bed curtains.....	25 to 26	27 to 28	4s. to 4s. 2d. (67 cents to \$1.013) per piece.....	Ordinary.
Splits.....	do.....	25	20 to 21	2s. 6d. to 2s. 8d. (60.8 to 64.8 cents) per piece.....	Do.
Zaraza carmin lisa: Splits.....	Red purple prints.....	28	21	2s. 10d. (68.9 cents) per piece.....	Ordinary, without starch, soft finish.
Ancha.....	do.....	30	29 to 30	5s. 2d. (\$1.257) per piece.....	Do.
Gasas splits, fondo blanco.....	.....	60 to 65	20 to 21	1½d. (1.9 cents) per yard.....	Ordinary.
Acordonada.....	.....	60 to 65	20 to 21	1½d. (2.3 cents) per yard.....	Do.
Listas caladas.....	.....	60 to 65	25	2d. (4 cents) per yard.....	Do.
Flores colores.....	.....	60 to 65	25	2½d. (4.4 cents) per yard.....	Do.

	50 to 60	35	2½ cents U. S. currency (a per cent discount) per yard.	Near medium.
Zaraza Americana: Fondo blanco pinta— Menuña negra.....	50 to 60	35	do.....	Do.
Grande negra.....	50 to 60	35	do.....	Do.
Fondo colores pinta, colores grande.....	50 to 60	36	4½ cents (a per cent discount) per yard.	Medium.
Fondo blanco pinta, menuña.....	50 to 60	36	4½ cents (a per cent discount) per yard.	Do.
Fondo colores pinta, menuña.....	50 to 60	36	5 cents (a per cent discount) per yard.	Do.
Driles Americanos.....	45 to 60	36	4½ cents (a per cent discount) per yard.	Do.
Do.....	45 to 60	36	6 to 6½ cents (a per cent discount) per yard.	Do.
Ponchos algodón.....	170	130	16 marks (\$3.81) per dozen.....	Ordinary, with good finish, like velvet.
Do.....	170	130	24 marks (\$5.71) per dozen.....	Do.
Do.....	170	130	28 marks (\$6.66) per dozen.....	Do.
Frazada algodón atelpadas.....	200	150	1.65 marks (39 cents) each.....	Do.
Do.....	200	150	24 marks (\$5.71) per dozen.....	Do.
Do.....	200	150	30 marks (\$7.14) per dozen.....	Do.
Do.....	200	150	36 marks (\$8.57) per dozen.....	Do.

NOTE.—All the prices in English currency must be understood to be free of packing on board in Manchester. The German and American prices are not free of packing, loco fábrica (place of manufacture).

Freights from European ports to Guayaquil.

Route.	From—	Articles.	Rate.
<i>Via the Straits of Magellan.</i>			
Lampont and Holt Gulf Line.....	Liverpool	Hardware ...	40s. (\$9.73)+5 per cent per ton.*
		Textiles	45s. (\$10.95)+5 per cent per ton.
Kosmos Line.....	Antwerp.....	do	35 francs (\$6.76)+10 per cent per cubic meter.
	Hamburg.....	do	35 marks (\$8.33)+5 per cent per cubic meter.
	Genoa	do	47s. 6d. (\$11.56) net per cubic meter.
<i>Via Panama.</i>			
Royal Mail.....	Southampton..	Hardware ...	36s. 9d. (\$8.94)+5 per cent per ton.
		Thread	45s. (\$10.95)+5 per cent per ton.
		Wool silk.....	70s. (\$17.03)+5 per cent per ton.
		Linen	75s. (\$18.25)+5 per cent per ton.
	Havre	Hardware ...	50 francs (\$9.65)+5 per cent per ton.
		Thread	55 francs (\$10.62)+5 per cent per ton.
		Wool silk.....	85 francs (\$16.41)+5 per cent per ton.
Hamburg-American.....	Hamburg.....	Hardware ...	40s. (\$9.73) per net ton.
		Textiles	60s. (\$14.60) per net ton.
		Cape.....	200s. (\$486.60) per net ton.
La Veloce.....	Genoa	Textiles	85 francs (\$16.41)+5 per cent per cubic meter.
Hamburg-American.....	Havre		
Compagnie Générale Transatlantique.	St. Nazaire....		
	Havre		Same as Royal Mail from Havre.
	Marseilles.....		
	Bordeaux.....		

* 1 ton=1,000 kilograms (2,204.6 pounds), or 40 cubic feet, at the option of the companies.

IMPORTS OF EXPLOSIVES IN PERU.

In reply to an inquiry by the United States Export Association of New York,* Consul Dickey writes from Callao, December 27, 1898:

The total amount of dynamite, powder, etc., imported into Peru from July 1, 1897, to June 30, 1898, was: Dynamite, 4,412 cases, weighing 20,295 kilograms (44,742 pounds); blasting and mining powder, 52 packages, each package containing 4 tins, with a total weight of 2,911 kilograms (6,417 pounds); common black sporting powder, 486 boxes, weighing 57 kilograms each, or, say, 2,770 kilograms (6,107-pounds) in all; triple dynamite fulminants, 1,435,000; shotgun fulminants, 3,240,000; fusé for dynamite fulminants, 164,900 rolls.

I have not been able to obtain values.

All explosives imported into Peru must be deposited in the vaults of the Sociedad San Lorenzo, in the Island of San Lorenzo, about 7 miles from Callao, and pay 20 cents silver (about 10 cents gold) per box.

*Advance Sheets of report have been sent to the association.

With the exception of sporting powder imported in small tins, which pays a duty of 50 cents silver a kilogram (about 25 cents in United States money), all explosives are free of duty.

Explosives are principally imported from Germany, England, and France, and a little from the United States. Among the principal importers of explosives in Peru are W. R. Grace & Co., J. Normand, E. Haines & Co., J. Ludowieg & Co., Duncan Fox & Co., Enrique Ayulo & Co., C. M. Schroder & Co., and C. Weiss & Co., all of Lima; and Milne & Co. and Sociedad San Lorenzo, of Callao.

OCEAN FREIGHT RATES AND ARGENTINE TRADE.

The Department has received the following, dated Buenos Ayres, January 18, 1899, from Minister Buchanan:

My observation leads me to feel sure that many low-priced staples used in quantities here come from Great Britain and not from us wholly because of the difference in freight rates between the two countries and this.

It is to be remembered that there are numbers of ships sailing between here and England and the Continent, and that the larger part of the traffic is from this country outward. This being true, it is easily seen that rates from England or the Continent to this country are more tractable and amenable to negotiation than are those from New York, where there are few ships engaged in the trade, and those owned and operated, with one exception, by companies having the bulk of their fleets engaged in the traffic between this country and England or the Continent.

Until this phase of the question is carefully studied, one fails to realize the great influence on our staple trade of our dependence upon foreign shipping interests.

For instance, a barrel of lubricating oil costs in New York \$3.12. The freight hither is \$2.64 and the duty \$5.10 in Argentine gold. Is it not remarkable, under such conditions, that we have as large a trade here as we have? Again, a barrel of gas oil costs in New York \$2.62½. The freight is \$2.64; the duty nothing. Under such a freight rate, it is easily seen that a difference of only 5 or 10 cents a barrel would be sufficient to turn the trade from us to any country where the cost price of the article is the same as our own.

I am convinced we should give this subject especial attention, as I am sure that orders for staple goods, especially for machinery and steel products, have gone, and will continue to go, to England and Europe, not because the goods can be purchased cheaper there

than in the United States, but because the advantages our country offers in the original cost of such goods are more than offset by the difference existing against us in the freight rates from New York to this city, and those from English or European ports.

For instance, I know of one shipment from England of an 11-ton boiler in pieces. The freight thereon was £11 10s., or, say, \$55 in United States gold, or \$5 per ton. The same importing firm received from the United States a 33-ton boiler of the same kind as the other and in pieces. The freight thereon was \$750 in United States gold, or \$23 per ton, a difference of \$18 gold per ton in favor of the English manufacture. The freight on the shipment from England was calculated by weight, while that on the shipment from the United States was computed by measurement.

These importers tell me they can buy such boilers and much heavy machinery and steel products very much cheaper in the United States than they can in England, but that they are obliged to buy them in the latter market, because the difference against us in freight is so great that it much more than offsets the difference in our favor on their first cost.

Without citing, as I could, other specific cases, let me say that the statement has been made to me by many importers here that the three lines operating ships between New York and the River Plata maintain at New York a close freight-rate understanding; and that the arbitrary and stiff rates thus held in force for River Plata freight undoubtedly injures our trade with these countries in many instances, and will continue to do so.

The reasons underlying this condition of things are, I think, apparent to anyone who has given the subject any consideration. Briefly, they appear to be the following:

First. That the great bulk of all River Plata products find their market in Great Britain or Europe, and hence shipping from those countries finds "return cargo." When there are large quantities of wheat, wool, and cattle to be moved, competition in rates to this country is certain between companies engaged in operating ships between here and the Old World. On the other hand, when the crops fail here, rates to this country advance, because of the consequent lack of "return cargo."

During the past two years, and largely as a result of our tariff on wool, our purchases here have notably decreased in volume, whereas our shipments hither have increased; so that now there is nothing like sufficient return cargo for all the ships reaching here from New York. As a result, such ships either load to Rio de Janeiro with cattle, picking up here such through New York freight as they can find, and then completing their load with coffee, or they go in ballast

to a Brazilian port, where they can find a cargo for New York or Boston.

It is therefore plain why freight rates from New York are arbitrary, high, and unelastic, and why they will probably remain so.

Second. With possibly one exception, all the steamship companies plying ships between the United States and this country maintain the larger portion of their ships in the traffic existing between England and here. They are therefore able not only to maintain stiff outward rates from New York by means of such an understanding as they are said to have, but also to manipulate their ships as the demands of outgoing Argentine traffic may make necessary, or as may seem desirable from their point of view.

The remedy for this state of things is not easy to point out. It must, however, soon be found by our people, since it is not to be supposed that we will allow our trade with these countries and with others to be jeopardized and held in check by our lack of capacity to grapple with and solve the chief difficulty in our path, as well as one of the most important problems we have before us as a people—the creation and rapid building up of a United States merchant marine.

MONAZITE CONCESSION IN BRAZIL.

Since my report of November 4,* the contention therein mentioned relative to the extraction of monazite sand from lands in this consular district has been settled.

To understand the matter, it is necessary to give a short history of the case. Several years ago, the Federal Government gave to Mr. John Gordon, an American citizen resident at Rio de Janeiro, the right to extract any and all sand contained in the "marinhas," which is a strip of land along the coast, extending inward 33 meters (108¼ feet) from a point midway between the highest and lowest tide, reserved by the Government for defensive purposes. In addition to this federal grant, Mr. Gordon obtained a municipal grant from the town of Prado, which is in close proximity to the largest deposits of sand. He also acquired by purchase considerable private property bordering on the deposit. For some time, he had ships go to Prado and load this sand under the name of ballast; but finally, the State and Federal Government became aware of the value of the sand (at that time it was worth about £80=\$389.32 per ton) and, after considerable discussion, he was forced to pay as export tax on each ton 22 per cent of its estimated value for State, 2 per cent for what is styled "statistical purposes," 2½ per cent federal, and a municipal tax of about 1 per cent if it lands at Bahia.

* See CONSULAR REPORTS No. 221 (February, 1899), p. 331.

The trade was large until 1896, when the governor claimed in the name of the State part of the deposit, and refused to allow any sand to be removed therefrom, unless under State concession. He claimed that the federal lands were not as extensive as had been said. After much argument, the governor decided to force the contention, and finally gave State concessions as follows: June 8, 1898, to Rebeiro & Co., 5,000 tons; July 18, 1898, to S. S. Schindler, an American resident here, 5,800 tons; and September 2, 1898, to Manuel Duarte, 5,000 tons.

In the latter part of December, Mr. Gordon made the following contract, which has recently been signed and published in the official paper. The governor, on behalf of the State, granted to him for twenty years the exclusive right to remove monazite sand from the lands of the State and the districts of Alcobaça and Porto Seguro, Gordon binding himself to pay the State £1 (\$4,8665) at the exchange of the day for each ton removed, in addition to the State and other export taxes.

All concessions already granted—*i. e.*, for 15,000 tons—were transferred to him by the concessionnaires, Gordon binding himself to pay them pro rata £2 (\$9,733) for each ton until the 15,000 tons are removed. The concessionnaires also agree to stop all suits, etc., relative to the title of the land and the right to remove the sand, relinquishing all claims except that above stated. Gordon now has the exclusive right for the extraction of monazite sand in Brazil, the largest and richest deposit ever discovered.

This sand deposit is on the coast of Bahia, near the little town of Prado. The town is reached after four or five days' slow travel by coastwise steamers; but, on account of the bar before the town, steamers frequently have to wait for more than ten days before they can enter. The sand occurs in great cliffs along the seashore, and is most frequently collected from what is washed down by storms and tides. Great quantities are under tide water, while a practically unlimited quantity is always high and dry in the cliff.

No attempt is made to purify the sand before shipment, the only expense other than the tribute already mentioned being the cost of collecting it and loading the ships.

According to the analysis made under State direction, the sand contains: Thorium, 1.5 to 3 per cent; yttrium, 1 to 3 per cent; cerium, 62 to 70 per cent; aluminium, 3 per cent; iron, 2.5 to 5 per cent; lanthanum, 2.5 per cent. On account of the high per cent of thorium, it is in greater demand than other sands, as the cost of extracting the thorium from sands of lower percentage is much greater than the proportion of thorium might lead one to believe.

During the year 1898, there were exported 2,338 sacks and 220

barrels of this sand to Hamburg and 1,300 sacks to Southampton. The sacks were of heavy cotton, holding 45 kilograms (99 pounds); 22 sacks make a ton. The barrels contain about as much as two sacks.

I inclose a small sample of this sand taken from the last shipment.*

H. W. FURNISS,

BAHIA, February 2, 1899.

Consul.

JEWELRY IN GUATEMALA.

In reply to inquiries from a trade association† in Chicago, Consul-General Beaupré writes from Guatemala, February 16, 1899:

During the years of Guatemala's phenomenal prosperity, this was a splendid market for precious stones and jewelry of all kinds. The trade was centered largely in the two cities of Guatemala and Quezaltenango. The enormous profits of the coffee planters created sudden and large wealth, which was lavishly expended in luxuries. This ended, however, some two years ago, since which time the trade has ebbed, until now it is practically nothing. The fall in the price of coffee, the depreciation of silver, and the revolutionary troubles created a panic, and great depression in business followed. With exchange at 250 per cent premium on New York and very high customs duties, it is almost useless to attempt to sell jewelry in this country at present. There were magnificent jewelry stores in this city, and some of them remain; but their business is very small. They are endeavoring to sell their old stock and import but little. There are no wholesale dealers, the merchants importing direct.

Most of the jewelry comes from Europe; but, for some reason, the Waltham watch holds the market and is used almost exclusively. This is probably due to the fact that it has been well advertised and pushed, and the peculiarity of this people is that they are averse to change, and prefer to buy that with which they are perfectly familiar.

The duty on each gold or gold-plated watch is 7 pesos, and on each of silver or other material 1 peso. This is in Guatemalan currency, with exchange fixed at 200 per cent at present.‡ However, a recent decree provides that 30 per cent of the import duty shall be paid in gold or its equivalent, which adds to the schedule rate given.

Diamonds can be bought here for less than the cost of importing

* Filed for reference in Bureau of Foreign Commerce, Department of State.

† Advance Sheets have been sent the correspondent.

‡ The United States Director of the Mint, January 1, 1899, estimates the Guatemalan peso at 43.9 cents.

them. They were brought in during the flush times in large quantities, and the conditions have forced many into the market. A very good white 3-carat stone can be bought for about 500 pesos (\$219), and, with exchange at 250 per cent premium, it could not be deemed profitable to import them. This will hold good in jewelry of all kinds, and, while the present distressingly hard times continue, it will be of little avail to attempt to do any business in this line in Guatemala. Watches can hardly be classed among the luxuries, and it is quite possible that small sales could be made.

But these hard times will not continue; the causes which led to them are being remedied, and the resources of the country are such that prosperity must come again within a reasonable period. The building of the Northern Railroad, which is in part constructed and which will connect this capital with Puerto Barrios, on the Gulf of Honduras, but four days' sail from New Orleans, is now practically assured, and will doubtless be completed by United States capital within the next two years. When this is done, American merchants can well expect that this Republic will be a profitable field for business.

There is nowhere in Central America a commercial agency similar to Dun's, and the only way to obtain information as to the responsibility of dealers is by inquiry of individuals or the banks, and this method is quite unsatisfactory. For this reason, much of the business is transacted through commission houses at New York or San Francisco, who send representatives here.

The customs duties on jewelry are as follows:

Gold or platina, any kind of alloy, with pearls or precious stones, net weight, 150 pesos per kilogram (2.2046 pounds).

Silver or gold, silver or steel, any kind of alloy, with pearls or precious stones, net weight, 50 pesos per kilogram.

Gold or platina, any kind of alloy, without pearls or precious stones, net weight, 50 pesos per kilogram.

Silver or gold, silver or steel, without pearls or precious stones, net weight, 10 pesos per kilogram.

Thirty per cent of the duties are payable in gold or its equivalent, the balance in Guatemalan currency.

The packing must be as light as possible, and yet secure and strong enough to withstand a long, hard journey and not too careful handling. The port of San José de Guatemala, whither all goods must be shipped, is an open roadstead, and to drop packages from the steamer into launches when a heavy swell is running, and then hoist them onto the pier, is a severe test upon the packing, and this can not be too secure. Should the goods be destined for Quezaltenango or any of the interior towns, they experience in addi-

tion the vicissitudes of a pack-mule journey over precipitous mountain trails, being bumped at intervals against overhanging rocks and trunks of trees. When the Northern Railroad is finished, these difficulties will be lessened, for Puerto Barrios has a harbor, and vessels can come up to the pier and unload.

Among the fine jewelry stores, I mention the following: F. Widmer, 9 Calle Oriente, bajos del Gran Hotel; Carlos Juvet, 6 Ave. Sur y 9 Calle Poniente; German Porcher, "La Perla," 8 Ave. Sur y 9 Calle Poniente; Joyeria "La Maisonnette," Cohn y Dreyfus; Simon Block, "La Esmeralda," 6 Ave. Sur fte. al I.

Prominent banking institutions in this city are: El Banco Americano, El Banco Agrícola-Hipotecario, El Banco Internacional, and El Banco Colombiano.

RUBBER IN GUATEMALA.

Consul-General Beaupré sends from Guatemala, under date of January 28, 1899, translation of an article on rubber, prepared by Mr. José Horta, of the city of Guatemala. Mr. Horta, adds the consul-general, is an experienced agriculturalist, and has handled the subject ably. Extracts from his report are given below:

Rubber was first brought into Europe from Latin America, much later from Asia, and lastly from Africa. The milky substance is produced by many and distinctly different trees, of which we cite: In Brazil, Peru, and Guiana, the rubber called "Para;" from the trees of the following families, *Siphonia* or *Hevea* (*Siphonia elastic* Pras, *Siphonia brasiliensis* Wild); in the East Indies, the *Ficus elastica*; in Sumatra, the *Urceola*; and in Africa and Madagascar, the *Artocarpus* and *Vahea gummiifera*.

In Guatemala, the *Castilloa elastica* Cero (an *Artocarpus*) is found in the wild state, which covers an immense zone in Central America; and the rubber which this tree produces is of the best and most valuable for the industry.

The *Castilloa elastica* is a tall, well-shaped tree, with smooth, greenish-white bark. At a height of from 15 to 20 yards from the ground, there start from the trunk (of spongy and porous wood) large and almost horizontal branches, from which hang two rows of leaves, long, oval shaped, and smooth edged (not dented).

The milk of the rubber tree, or its mercantile product, is contained principally in the fibers between the woody portion of the tree and the bark. This fibrous part is a vital portion of the tree. For this reason, in making incisions in the bark to obtain the milk, it is necessary to proceed with great caution and according to the method described further on.

The milk contains more or less water, according to the time of its extraction; on an average, it can be calculated to hold about 60 per cent water and other substances and 40 per cent salable product; of this, approximately 33 per cent is rubber of superior quality.

The climate most appropriate for rubber is the hot or coast, with a temperature of from 25° to 35° Celsius (93° to 103° F.) and altitude above sea level up to 1,500 feet. The ground should be moist, deep, and loose; neither clay nor stone. Rubber should not be planted in the sun. We found our opinion upon the following reasons:

- (1) The nature of the rubber tree.
- (2) The trials made in Guatemala since 1872.

(3) The consideration that, planting in the shade, there is complete security of a satisfactory result.

If the wild tree always seeks the shade of trees of greater growth in the natural forests, it is because, by the help of these, its sap remains in the state imposed by nature as a condition of its proper growth and production. It is not the desire here to make a detailed study of the tree; but we do wish to note that its leaves do not resist the sun, nor do they, by the nature of their surface, oppose the evaporation of the sap of the tree. It is clear that without shade, there is an evaporation which must exercise a harmful influence upon the production of the milk of the tree. It should also not be lost sight of that on the Pacific coast we have a dry season for six consecutive months, very prejudicial to plantations in the sun. Allow the rubber tree a high and well-distributed shade, without undergrowth or brush, and the result will be healthy and robust trees of rapid growth, long life, and abundant yield. It is a mistake to wish to cultivate, with the desire of obtaining good yields in both branches, plants such as coffee and rubber, requiring distinct climatical conditions, soil, and atmospheres. The result is that neither one nor the other finds the requirements necessary for proper development. It would appear much more feasible to conduct the cultivation of vanilla simultaneously with that of rubber, utilizing the trees for shade.

Advocating the planting in the shade is equivalent, in a country like Guatemala, still possessing so much virgin forest, to planting in the woods. There are thousands of acres of land where it would be sufficient to clear the forest (cutting down part and removing the low branches and undergrowth) in order to obtain ground sufficiently shaded and with the necessary ventilation, the latter a condition of greatest importance. The trees and undergrowth cut down could be spread over the ground to prevent the growth of weeds, as well as to serve as manure. In planting the rubber tree, the ground should be perfectly cleaned for a circle at least a yard in diameter, and the tree placed in the center. We advise the planting of trees taken from a nursery, as incomparably better results will be obtained than by planting by seed. The nursery is formed in damp ground, shaded and well worked, and the seed (which is gathered here in March and April) planted at intervals of about a foot. The seed is planted just as gathered, with gum and all; washing may injure the later growth and may even prevent sprouting. After a year in the nursery, the trees are taken out with great care (it is best if the earth adheres to the roots) and transplanted.

The least distance at which rubber trees should be set out is 6 yards apart, and they should be in straight rows, so far as possible; if a choice can be made, 8 or 10 yards would be preferable. During each of the first two years, from three to four cleanings should be made, these to consist principally of cutting with the machete the undergrowth which has sprouted, and covering the ground as has previously been explained. In the third and fourth years, two to three cleanings per year should be made; and from the fifth year, one cleaning annually will suffice, until the growth of the tree impedes the further development of weeds. Before beginning to exploit, the trunk of the tree should measure at least 12 inches in diameter, and from 12 to 15 yards in height, for which from nine to ten years is necessary.

The milk may be extracted from the trees twice each year, during the rainy season; about two months after its commencement and towards the termination, the most propitious time being when the tree has dropped its leaves.

A tree planted and cultivated under good conditions will give an annual product after nine or ten years of 1 pound of rubber, or, say, $2\frac{1}{2}$ to 3 pounds of milk. With proper study of the nature of the rubber tree, the progress of its sap, and the stimulants and fertilizers that might be best for it, it is very probable that this yield would be greatly increased.

EXTRACTION OF RUBBER.

Until now, the machete has been used in Guatemala to make the incisions in the bark, incisions in the form of small canals about three-fourths of an inch wide, which receive the milk. In other countries (as in the East Indies), there is employed a kind of knife which allows the making of an incision which is cleaner and better directed.

To extract a good quantity of milk, it is not sufficient to make only one incision at the foot of the tree, as the fibers are not good conductors, reuniting in a short time and distilling all the milk in one point. Care should be taken that the bark of the tree remains intact in one continuous strip the entire height of one side of the tree; if the entire circumference of the trunk were cut (even by incisions situated at different heights), the tree would die within a few days. To avoid this danger, we have seen the following modes employed:

(1) From a certain height above the roots, incisions are made in the trunk every meter or meter and a quarter approximately, until within 2 meters of the first branches. Each incision consists of two symmetrical cuts, which, together, will cover two-thirds of the circumference of the tree, and will form an angle of 45° , in order that the milk may run freely to the lowest point. The points of all the incisions must be in a perpendicular line, so that the milk from the highest incision, after concentrating in the angle formed by the two cuts, may run to the lowest point of the next lower incision and from there on to the following, etc., until reaching the lowest, where it is collected, as explained further on.

(2) The incision is extended to the same height of the trunk as indicated in the first method, but is continuous and consists of cuts, one perpendicular to the other, always taking care never to cut into more than two-thirds of the tree's circumference, thus leaving one-third of the bark intact.

It is useless and even dangerous to make the incisions so deep as to penetrate the woody part of the tree. On the contrary, great caution should be exercised to preserve the fibers closest to the wood.

From the point of the incision nearest the ground, the milk is conducted by a canal to a receptacle of clay or wood. When collected thus, the milk must be coagulated to obtain the solid marketable product. This part of the process merits a serious study, as the best mode of obtaining the finest and most abundant product has not been decided. We limit ourselves to indicating the principal processes we have seen employed.

The most rudimentary consists in collecting the milk in a trough or even a hole excavated in the ground (which detracts from its value) and employing in its coagulation the juice of the vine here called "Quiebra-Cajete" (an infusion of the leaves of the vine). Alum can also be employed, and exercises a very rapid action over the milk.

The water contained in the milk may be evaporated by indirect fire, taking care that the receptacle does not communicate a bad color to the rubber; or, the milk may be mixed with water, which is poured off at intervals, until all impurities are removed. The clean rubber, which presents the aspect of a spongy mass, is passed through a press to expel the water, thus obtaining a white product of superior quality, which is left to dry in the shade, in order that it may not show on the outside a glutinous liquid, which detracts from its market value.

COST AND PROBABLE PRODUCT OF A PLANTATION.

This calculation must naturally be incomplete, as the cost will depend in great part on the price of the lands, on the greater or less facilities for obtaining workmen, the mode of paying them (by day, by task, with advances, etc.), on the distance

apart that trees are to be planted, whether the land is to be used exclusively for rubber or not, and on many other considerations.

The figures expressed herewith, therefore, do not pretend to a rigorous exactitude, but will serve as a guide for the agriculturist.

We will suppose that the trees are to be planted at 8 varas (1 vara=33 English inches) distance, so that each will have an approximate area (with space occupied by shade trees) of 64 square varas, which we believe necessary for the proper development, thus allowing approximately 10,000 trees to the caballeria (112 acres); cost of land at \$400 (\$175.60 in United States currency)* per caballeria, a price somewhat high, as some coast land (hot) adequate for this cultivation can be purchased in Guatemala for less; but we have adopted this figure, as, according to existing laws, it is the average cost of public lands in the Republic.

Cost per manzana†.....	\$6.25=\$2.74
Fencing per manzana.....	10.00= 4.39
Nursery, at \$10 per 1,000, say, for 159 plants.....	1.59= .698
Preparation of ground and arranging natural shade, per manzana..	8.00= 3.51
Planting 159 trees to the manzana.....	3.00= 1.32
Cleaning by machete, four in first year.....	16.00= 7.02
Three cleanings in second year.....	12.00= 5.27
Two cleanings in third year.....	8.00= 3.51
One cleaning each year from fourth to sixth, inclusive.....	12.00= 5.27
Interest on invested capital, at 10 per cent for ten years.....	68.78=30.19
Management, etc.....	4.38= 1.92

Total cost in Guatemala (200 per cent premium is ruling rate on gold to-day) of 159 trees occupying a manzana of ground and 10 years old..... 150.00=66.00

From the foregoing calculation, it may be seen that a plantation of, say, 100,000 trees requires 10 caballerias of ground (besides that which may be necessary for buildings, huts, etc.), and would cost, after ten years, about \$95,000 (\$41,700).

If the annual yield of each tree after ten years is 1 pound of rubber of good class, 100,000 trees would give 1,000 centals per year of good rubber. At present price of the article, these 1,000 would be valued in Guatemalan money at to-day's exchange \$262,500 (\$115,238). There is to be deducted from this:

Cost of extraction and collection of the milk and manufacture of product (which together may be calculated at 30 cents per pound of rubber) for 1,000 centals.....	\$30,000=\$13,170
Expense of transportation to point of shipment (which varies in each case, but can be calculated in lands situated on the Pacific coast at \$1.50 to \$2 per cental) for 1,000 centals.....	1,750= 768
Expense for embarking, more or less, 80 cents per cental, or, for 1,000 centals.....	809= 355
Ocean freight, insurance, commission on sales, and other expenses, approximately.....	40,000= 17,560
Total.....	72,559= 31,853

* The value of the Central American peso or dollar was estimated by the United States Director of the Mint, January 1, 1899, at 43.9 cents.

† Square of 100 varas, or 275 feet.

Deducting the cost of \$72,559 (\$31,853) from the income leaves a balance of \$189,941 (\$83,385).

According to these calculations, one crop, after ten years, will produce double the amount expended during that time. Even reducing these figures (which are not too high) to one-half, in order to be free from any exaggeration, and supposing a yield per tree of 6 ounces of good product, the net annual product will be incomparably more remunerative than that which coffee under the best and most favorable circumstances can yield.

CULTIVATION OF THE VANILLA BEAN IN MEXICO.

The State of Veracruz has been considered the home of the vanilla, but recent developments show that vanilla can be cultivated in the State of Tabasco and on the Isthmus of Tehuantepec. The true home of the vanilla, where it flourishes best in its wild state, is a narrow strip about 30 miles wide, 5 miles back from the coast, and 90 miles long. The upper end of this strip is about 50 miles south of Tampico and extends along the coast 90 miles toward the city of Veracruz, the bottoms along the Tuxpan, Casonez, and Nautla rivers and the creeks contiguous constituting the richer parts. Here the cultivated varieties yield most without artificial fecundation, either on account of the large number of wild bees in this locality or by self-pollination, which some claim is impossible. Artificial fecundation must be practiced in order to produce the beans in commercial quantities.

PLANTING THE VINE.

The vanilla plant is a vine of a light-green color, with a smooth, waxy, transparent bark. It has a thick, waxy-looking leaf, light green in color, 6 to 9 inches long, $1\frac{1}{2}$ to 2 inches wide, and sharply pointed. The vine reaches out tendrils which cling tightly to its tree support, but do not, as some believe, draw nourishment from the tree.

The best time to set out the vines, or rather cuttings, is in April or May. The cuttings are the vines divided into lengths usually $2\frac{1}{2}$ to 3 feet long. Some of these can be cut in two according to the number of joints. Two to three joints are sufficient to put under the ground, with the same number of joints above ground. The plants are easy to propagate; in fact, they are hard to kill if kept from being bruised. A cutting can be kept in the house on a dry shelf, and it will live for months with scarcely any apparent change. Cuttings can be procured soon after the beans have been gathered, and usually sell for from \$10 to \$20 Mexican per thousand.

PREPARING A VANILLA PLANTATION.

Much depends upon the selection of location. The first thing is to have your plantation where one can prevent the pilfering of the beans while ripening. Enough can be carried away in a person's pockets to amount to more than a month's wages. The temptation is great, and often one does not harvest the fruit of his own labor; others do that for him, unless his vines are where a strict watch can be kept over them. Always select wild lands and clear out all the large trees. A vanilla plantation need not be large. A few acres, with care and proper fecundation, will soon produce a fortune. Patient care and attention at the proper time is the chief secret of success. For instance, if fecundating is not done in the proper way and at the proper hour of the day, the fruit is lost for that year. There are other peculiarities about the vine equally as essential to know, and success comes only with painstaking and patient care.

The vines require rich soil, heat, ventilation, shade, and moisture. Rich pockets of land along the creeks and river bottoms are best. A profusion of wild vines of all kinds growing into a jungle, with abundant loose soil affording ventilation at the roots, is the best proof of the adaptability of the land. Let the land be free from sand, on account of drought, and free from clay, which would cause the vines to rot during the rainy season. Let there be plenty of small trees at the feet of which the vines may be planted. Trees which have smooth bark, and which never shed their bark or leaves, which grow to be no larger than 2 to 4 inches in diameter and from 7 to 10 feet high, are best for this purpose. Usually, a variety of such grow on all wild lands and any of them are good, if the trunk of the tree be smooth, with plenty of sap. A small orange tree affords a good trunk for vanilla to grow to. If, while clearing the land, there be not enough of such trees found already growing to plant the desired number of vines (there should be from 1,500 to 2,000 vines to the acre), enough should be planted, selecting the kinds that make the most rapid growth, which exist in abundance and are destroyed by the thousands in nearly every new clearing of land.

The ground should be kept clean from weeds. All undergrowth should be thrown around the vines to decay, and serve as a mulch for the roots. The ground around the roots should not be disturbed. One or two vines should be planted to each tree and tied at first to the trunk with some flat, flexible band, such as strips of cocoanut leaves or plantain fiber. Round cord should not be used, as it is liable to cut and injure the green, succulent stem of the vine. Live stock should never be permitted on a vanilla plantation. The stem and roots of the vine should be disturbed as little as possible. The vine needs no cutting or pruning. All other wild vines should be

cut out and kept from choking the vanilla vines. The trees should be topped to prevent too high a growth, so the flowers can be reached from the ground. Light and ventilation beneath, shade from the sun above, rest, and plenty of moisture—but free from standing surface water—are the prime requisites for the growth of vanilla vines.

DECAY AND RECUPERATION OF THE VINE.

One peculiarity of the vine is that after three or four years' planting, the stem will rot off at the roots and continue to rot 3 to 4 feet up the vine, while the top looks green and flourishing. In the meantime, from above where it is going to rot, it shoots out fine little rootlets like threads and continues them to the ground. So delicate are these threads running along the trunk of the tree, and so prominent the rotted-off end of the stem that it gives the vine the appearance of living independent of the earth, giving rise to the theory that it is an air plant. It will sustain itself in a severed state; but to make material growth and fruitage, it must connect itself with mother earth.

YIELD.

The new vine will commence bearing the third year from planting, and full crops may be expected the fifth year. A vine will bear from fifteen to forty-five beans a year. I have seen as high as thirteen full-sized beans in one cluster, and frequently see clusters of nine. Some vines have been known to produce as high as sixty-five beans at one time. Twenty beans to a vine is a good average.

A green bean is worth from 8 to 14 cents at present in this market, or an average of 12 cents. In some years, the bean brings as high as 18 cents.

Rarely do those who grow the beans cure and market their crops. Others buy the green beans and make a business of curing and exporting them. Judging from the way they all get rich at the business and the difference between the price at which they buy the green bean and the price at which they sell the cured, there must be more profit in the curing than in the growing. Still, in view of the price of vanilla and the demand for it all over the world, there are large profits for both parties.

PRICE OF VANILLA LANDS.

Wild lands, suitable for vanilla, can be bought for from \$5 to \$10 per acre. There are vanilla-producing plantations in the vicinity of Papantla that could not be bought for \$500 an acre. Various estimates are being furnished as to the cost per acre of converting wild lands into vanilla-producing plantations. Approximately, \$85 an

acre is correct, which is very moderate for so profitable a plant. To make a success in this industry, a man should move his family here, turn every member into workers at the proper time, then wait and make a living at something else for four years, until the first crop is gathered. They fail who try to make a vanilla plantation produce by the use of money alone.

HOW TO SUCCEED IN THE INDUSTRY.

The greater part of the vanilla in this consular district is grown about Papantla, much of which is exported from Veracruz, it being easier to reach Veracruz by water than Tuxpan by land. I do not regard Papantla any better for vanilla than the balance of the district that I have already outlined, the success being due to the colonists who settled there years ago—patient, industrious, hard-working French people, who came here poor, with large families, the women and children all turning out to help at the necessary seasons. The most of them have since grown rich. Some of them are now living in France, while others continue to make their homes in Mexico.

POLLINATING AND HARVESTING.

The two busy seasons of the year are during the pollination months—March, April, and May—and the gathering months—November, December, and part of January. During the balance of the year, the plantation should have absolute rest, other than keeping down the weeds and undergrowth.

Many of the beans are gathered in October, sometimes before they reach their growth, by those who see an opportunity of gathering them unknown to the owner, or by the owner for fear of losing them because he has not his vines where he can watch them. Beans gathered too soon are woody and inferior in quality, lacking the oil that furnishes the flavor. Good, ripe beans lose but little of their weight while curing; 5 pounds of green beans will weigh $4\frac{1}{2}$ pounds when cured. The quality and flavor is increased by allowing them to mature and by proper curing.

The curing is principally done by Spaniards who have followed this business. The process adopted is slow and laborious. The secret is to evaporate the water, while retaining the oil, prevent the bean from molding, and not injure the flavor.

CONCLUDING REMARKS.

Neither space nor time will allow me to go into the many little details necessary in planting, growing, and curing. In this report I only describe the kind of lands necessary, the best location, the

profits of the business, the necessary requirements for successful fruitage, and the causes of failure. Minor details can be learned after getting here.

There are a few Americans already here in the business with plantations about ready to bear. Some have just started. Many others are coming, judging from the numerous inquiries. Heretofore, the French have mainly cultivated the vanilla, with now and then a Mexican, while the Indians hunt and gather the wild vanilla.

Vanilla is principally exported to the United States—about \$2,000,000 worth per annum.

I write this article to answer in a general way the many inquiries addressed to me concerning this industry. Now that our people are embarking in it, I look for improved methods that will increase the production and simplify the process of curing.

A. B. JONES,
Consul.

TUXPAN, *January 30, 1899.*

SHOE TRADE IN MEXICO.

Under date of February 13, 1899, Consul Kindrick writes from Ciudad Juarez, in answer to inquiries by the editor of a Massachusetts trade journal,* as follows:

Under present conditions, the shoe trade of Mexico does not offer very flattering prospects to American manufacturers. They can not hope for considerable sales in the cheaper grades of foot wear, and must content themselves with supplying a first-class shoe to meet the demand of a restricted number of the people—those only, in fact, who can afford to wear a United States shoe of the first quality.

It is universally admitted in the Republic of Mexico that the American shoe is without a rival as to style, quality, and finish. First-class shoes of European or of Mexican manufacture can not compete with them. But this shoe is necessarily worn by the minority of Mexicans—those who can afford the luxury of a shoe that costs from \$3 to \$7 in gold; therefore, the trade in Mexico in American shoes is limited to a certain grade of shoe worn by a certain class of people.

The laboring classes in the United States wear shoes that cost from \$1 up, while the laboring classes in Mexico wear shoes that cost \$4† the dozen. The duty on American shoes is from 30 to 60 cents per pair. The Mexican laborer, the maximum cost of whose

* To whom copy of the letter has been forwarded.

† Prices are all stated in United States currency.

shoes is 50 cents, can not be considered a customer for American shoes that would cost from \$1 to \$3.

A large class of Mexicans, commonly called peons, wear a kind of sandal. These are called "guaroches," and consist of a simple sole of leather held to the feet with strings which pass between the toes and are tied about the ankle.

The cheaper grades of shoes made in the United States are not imported into Mexico. It is improbable they could be successfully introduced here, even if not subject to a high tariff. It is needless to speak of the difference in quality and durability. The price of any common article of daily use appeals first to the poor Mexican. His daily wage will not permit him to consider durability, when the difference in price is great.

Taking into consideration the population of Mexico and the universal need for such a common article, the imports of American boots and shoes are small. For the fiscal year ended June 30, 1898, the importations at this port amounted to \$19,000.*

There are no large factories for making shoes in Mexico, as in the United States. There are extensive establishments in Leon, Mexico City, and Guadalajara; but they are not exactly factories. The shoes are made under a kind of tenement system. Workmen receive a stipulated sum for each pair of shoes made, according to quality.

There is an establishment in Chihuahua where sandals, or "guaroches," are made. The work is done by hand.

The limited number of boots and shoes imported into Mexico from the United States comes from Boston and St. Louis. American capital has not attempted to establish shoe factories in the Republic; but it is quite possible that such an industry, using all the modern labor-saving devices and producing a cheap shoe, would prove a successful investment.

BOTTLES IN MEXICO.

Consul Pollard, of Monterey, on January 25, 1899, writes:

A firm in Pennsylvania having written for information touching the importation of glass bottles into Mexico, I instituted inquiries in the premises, and the result seems of such general interest to those engaged in the trade in the United States that I deem proper to reply to the firm referred to in a formal report.

The brewery in this city purchases a large quantity of bottles

* The total exports of boots and shoes from the United States to Mexico during the year ended June 30, 1898, were valued at \$88,000, according to the returns of the Bureau of Statistics, Treasury Department.

annually, and, in a few months, will greatly increase this consumption. The bottles used here are nearly all purchased in Germany. The manager states that he has not been able to induce manufacturers in the United States to sell him bottles at reasonable rates, and that he has therefore been forced to resort to Germany, where he can purchase them to much better advantage.

There are sixteen breweries in the Republic of Mexico, viz, one in Leon, one in Merida, three in Mexico City, one in Puebla, one in Jalapa, one in Oaxaca, one in Guadalajara, one in Orizaba, one in San Luis Potosi, one in Germosillo, one in Chihuahua, one in Tereos, one in Toluca, and one in Monterey, the last being the largest.

Besides the breweries, there are three soda-water factories, two wholesale druggists, and several other industries, including a distillery, which use bottles extensively in Monterey. In all the cities named, there are similar industries in which bottles are used in large numbers. It is therefore, it seems to me, to the interest of those engaged in the bottle industry in the United States to turn their attention to this country and, by reducing their prices to conform to those of Germany, capture this immense market. It is suggested that if a factory wishing to export bottles to this country employs a competent man, conversant with the Spanish language and Mexican customs, success is almost certain.

JOHN K. POLLARD,
Consul-General.

MONTEREY, *January 25, 1899.*

Under date of January 27, Consul Kindrick, of Ciudad Juarez, says:

I have no means of ascertaining the total amount of importations into the Republic of Mexico from Europe and the United States, but it is estimated by dealers that glass bottles to the value of more than \$100,000 (United States currency)* are annually imported.

At present, there is not a bottle factory in Mexico, though I am reliably informed that a plant is soon to be put into operation in the city of Chihuahua.

Europe enjoys the largest share of this trade, the imported bottles coming principally from Belgium and Germany. The importations at this port for the fiscal year ended June 30, 1898, amounted to \$8,000 (United States currency). The bottles entered at the custom-house in this city are mainly from the United States.

* According to official returns, the imports of bottles (for wine, spirits, and beer) into Mexico were valued at \$83,560 (United States currency) during the first six months of 1898, or at the rate of \$167,120 per annum.

The tariff on bottles used for wine, beer, and liquors is a trifle less than one-fourth of 1 cent per pound.

As indicated by the figures above, giving the importations at this place, it will be seen there is quite a demand for glass bottles in northern Mexico. The ones chiefly used are the common beer bottles. The brewery at Chihuahua probably purchases the bulk of these. Common beer bottles are also used for cheap clarets, and tequila, which are bottled here by the dealers.

Pittsburg, Pa., is the point in the United States from which bottles have been chiefly shipped to Mexico.

Ketelsen & Degetau, of this city, are wholesale dealers and supply the local demands in this section.

CARRIAGE AND WAGON FACTORY IN MEXICO.

As a result of the growth of Casas Grandes, the terminus of the Rio Grande, Sierra Madre, and Pacific Railroad, which runs southwest from this city into Mexico, a number of enterprises are pending. The town of Casas Grandes is the base of operations for the new mining country recently opened, and is rapidly developing. The demand for vehicles of all kinds and for furniture and building materials—like sashes, doors, and blinds—has become so brisk that capital has sought the field as one promising profitable investment.

The Mormon colonists near Casas Grandes have a small furniture factory, which turns out a cheap grade to supply local demands.

A factory has recently been established in the city to make wagons, buggies, sashes, doors, and blinds, and is now ready to be put into operation. It is owned and controlled by the Casas Grandes Industrial Company, which is capitalized at \$25,000. Mr. J. P. Ramsey, general manager of the Rio Grande, Sierra Madre, and Pacific Road, is president, and the stockholders are principally officials of that line. A concession was obtained from the State of Chihuahua which exempts the plant from taxation for five years. The machinery was purchased at St. Louis at a cost of \$10,000.

The factory will furnish employment at first to about twenty men. Most of them will be skilled laborers from the United States. It is the intention of the company to merely supply the demand in the vicinity of Casas Grandes and in the mining districts. Heavy wagons, adapted for long hauling over rough mountain roads, are especially necessary for use at the mines. The hickory and oak used in the construction of the wagons and other vehicles will be purchased at Memphis, Tenn. The timber in the Sierra Madre Moun-

tains is not available, and will not be until there is an extension of the Rio Grande, Sierra Madre, and Pacific Road, which is a probability of the immediate future.

The Casas Grandes Industrial Company has every promise of success. In the first place, the plant is exempt from taxation for a period of five years. The machinery used for the manufacture of the objects for which the plant is established was admitted free of duty. There is no tariff duty on wood imported as raw material. At this port, during the past year, \$22,000 worth of wagons and other vehicles were imported. The duty assessed upon these objects varies from \$10 to \$50 for each vehicle.

On account of these facts, such an establishment promises to prove a good investment.

CHARLES W. KINDRICK,

CIUDAD JUAREZ, *February 23, 1899.*

Consul.

COLLECTION OF DEBTS IN ENGLAND.*

It is well, perhaps, to state before discussing this subject that the law of England only applies to England and Wales, and that Scotland, Ireland, the isles of Man, Jersey, and Guernsey each has its own laws, and the judgment of a civil court in England would be ineffective there.

The collection of debts may be held to embrace claims arising under wills, deeds, settlements, intestate estates, infancy, master and servant, landlord and tenant, bankruptcy, marriage, fraud, and many other matters which form a large proportion of the litigation calling in aid the immense jurisprudence of the country. These matters it would be impossible to go into in a short disquisition, as they are in themselves subjects involving a large acquaintance with the common law and statute law of the land, and are treated of in some thousands of standard works, too numerous even to refer to; therefore, in writing this article I shall refer only to such debts as are incurred in the ordinary way of trade and usually arise from the relation of vender and purchaser, or, speaking commercially, between manufacturer or merchant and customer.

First, then, to recover a claim, proceedings must be taken by the proper person and in the country in which the debt is owed.

It is necessary next to inquire, Who can bring an action to re-

* NOTE BY THE CONSUL.—This report was made in response to a request from the director of the Philadelphia Commercial Museum; but as American trade is becoming so important a factor in England, information about the collection of debts may prove of general interest, and I inclose a copy of the abstract sent to the museum.

cover a debt? The answer is, Any person not suffering under disability and of full age. A person bringing an action must be of full age—*i. e.*, 21 years—but an infant may sue by his or her next friend, who would have to give security for costs. A lunatic could only bring an action by his or her committee appointed by the court. A married woman may bring an action in her own name in all matters affecting her separate estate, or she may be sued in a like manner.

Assuming, then, that there is no disability, a creditor residing in America can bring an action to recover money due in Great Britain; but it is always open to a defendant to apply to the court for security for costs from the plaintiff, which would be granted because the plaintiff resides out of the jurisdiction of the court.

There is no means of compelling a debtor to pay the costs of collecting a debt, unless such costs are incurred in an action to recover the money in some court.

Debts are recovered either in the supreme court of judicature, or in the county court of the district where the defendant resides, or where the cause of action arises.

The initial step to the recovery of a debt is a clear statement of the circumstances under which the claim arises, for the guidance of the solicitor taking up the case, accompanied by a detailed account of the claim, setting out fully the dates of claims and the consideration for them.

The name and address of the plaintiff and of the defendant, both Christian and surnames, must be given in full; and it must be stated, if they are women, whether married or single. In case the Christian name is not given in full, the sex of the plaintiff or defendant is required. With the instructions for the action, all documents in writing affecting the claim and all letters passing between the parties, with copies of letters where the originals can not be sent, and especially such letters as contain an admission of the debt, should be sent. In the case of a limited-liability company, it can sue and be sued in the name of the company. The same remark applies to private firms and joint-stock companies; but it is always best to give the individual names of members of a firm where this is possible, as the information can be obtained under order of the court, and, if it becomes necessary to issue execution, it makes the duties of the sheriff easier. In case of an American firm suing, it is well to give the names of the firm, and, should it be a joint-stock company, all information as to its constitution and officers and any company by-laws under which these officers act. This information may be asked for, and, if given in the first instance, the three weeks' time of trans-Atlantic correspondence will have been saved.

In case it should become necessary to send to England any legal

document intended as an authorization or as proof (such as statutory declaration), it is desirable not only to have such document attested before a notary public, but that official's signature and his authority to act should be verified by a British consul, who will sign and affix his seal. By reference to the Register issued by the Department of State of the United States, or upon application to the Department itself, the name and place of residence of the nearest British consul can be obtained.

Having sent these particulars, with the defendant's address, to the solicitor engaged for the plaintiff, an application is usually made by him in writing for the payment, which frequently brings the money or raises the issue between the parties, if there is a dispute.

The solicitor will, in case proceedings become necessary, then decide in what court they shall be taken. If the amount involved is large, the action will be brought in the superior court; but if a small one, in a county court. On action being taken, a debtor usually takes one of the three courses—he pays the money, defends the action, or becomes bankrupt.

If he pays the money, he usually pays only taxed costs as between party and party, and the solicitor would have some small amounts, not allowed against a defendant, to charge his client with; these would vary according to the work and trouble.

If a defendant puts in a defense to the action, he may plead "never indebted" and put the plaintiff to proof of his claim, besides getting security for costs. If the plaintiff is put to proof he must either attend the court personally in England, or his solicitor must get an order from the court in England to take his evidence under commission by some person appointed by the court. This procedure involves considerable outlay, as it is necessary to settle interrogatories and matters relating to the action, and it is never so satisfactory as personal attendance, because the impression conveyed to the court by a witness often decides the fate of the action.

If proceedings go to trial in a supreme court, such trial would be before a judge of assize, either in London or in the country assize, usually held in the large cities and county towns. The expenses of a trial at assizes may be large, as only barristers can plead before such courts, and they are paid large fees. Barrister's fees range from 5, 10, 15, 20, to 100 guineas, and even more in large trials. A guinea is practically \$5.10.

If a trial is successful, the plaintiff has always to pay some solicitor, and client costs to his own solicitor (the defendant only paying taxed costs as between party and party); but if unsuccessful, he would have his own costs and those of the defendant also to pay,

and these costs vary and are affected by the number of witnesses and the amount of evidence adduced at the trial.

Only very clear and important cases should be fought out to the bitter end, and undertaken only after having obtained the best legal advice.

It frequently, and indeed most frequently, happens that the proceedings in a superior court begin and end with the writ of summons, which costs from £3 to £5 (\$14.60 to \$24.33).

Having obtained judgment, the next proceeding is to obtain satisfaction of the debt; either by process against the defendant's person or his goods.

Imprisonment for debt, except in small county-court cases, is done away with in England. In a small county court, judgments and executions can be issued against the person, after a summons has been issued and heard by the judge for commitment. The judge hears the evidence as to defendant's position, and then makes such an order as defendant's means will allow, such as 5s. or 10s. a month; and in default of payment, a committal is usually made for twenty-one days to the debtors' prison of the district.

Where a defendant has goods, such as furniture or other effects, these may be seized, under an execution executed in the superior court cases, by the sheriff, who holds the money recovered for fourteen days, during which time a bankruptcy petition may be filed by or against the debtor.

Where it is known that money is owed a debtor, it is possible to attach the money in or towards satisfaction of the debt, and a garnishee summons is issued against the person owing the money to the debtor, which is heard by the registrar of the court, who usually makes a garnishee order on proof of the indebtedness of the debtor.

Where a debtor becomes a bankrupt, he has to file accounts and submit at once to an examination before the official receiver in bankruptcy, who publishes to each one of the creditors a statement of the debtor's assets and liabilities and his account of the reason of his failure to meet his engagements; and in the course of a few weeks after filing such accounts as the court considers necessary, he is examined in open court before the judge, who does not give him a discharge unless his position is solely in consequence of misfortune, and in no case (except with the consent of the creditors) unless his estate pays at least 10s. in the pound, or 50 per cent.

In nine cases out of ten, if a defendant becomes insolvent, the best course is to accept a "composition on the debt" in preference to the bankruptcy, as it seldom happens that an estate yields much for the creditors after the expenses of the bankruptcy are paid.

It sometimes happens that goods seized in execution are claimed

by third persons, and in such a case the ownership of the goods is tried upon an interpleader summons before the judge, who hears evidence and makes such order as the facts warrant. Such claims are frequently made where the man and his wife both carry on separate businesses. It is very important to know that by virtue of the statute of limitations, the right to bring an action on simple-contract debts is barred in England after six years from the last payment on account or from the last payment of interest on a debt, and that a defense of the statute is a bar to the action where it is properly pleaded.

If an action is brought on a bill of exchange, unless the defendant disputes the signature, there is no defense to it, and judgment may be obtained summarily; so that where a bill of exchange or some admission of the debt can be obtained, it facilitates the recovery considerably.

It not infrequently happens that an execution issued by the sheriff is met with a bill of sale, and, if this is regular and properly registered, there is no alternative but to withdraw. Executions are also frequently defeated by a landlord who has a prior claim to rent, within certain limits.

There are trade gazettes published in England which give a list of all bills of sale registered and of all bankruptcies, county-court judgments, and other matters, and, as these are issued weekly, the commercial world is pretty well posted as to the status of its debtors.

Legal proceedings for the recovery of debts in England are somewhat perplexing and slow, but the courts and officers are absolutely beyond reproach, so far as justice and integrity are concerned.

The above article, treating in condensed form and for American use of the practical points of law and methods of procedure for the collection of business debts here, was prepared, with my aid and suggestive assistance, by my vice-consul, F. M. Burton, esq., who is also an English solicitor and has had much practice in that line.

MARSHAL HALSTEAD,

BIRMINGHAM, *October 14, 1898.*

Consul.

COLLECTION OF DEBTS IN IRELAND.

Consul Wilbour sends from Dublin the following report, prepared at the instance of the Philadelphia Museums, to which copy has been sent:

In Ireland, aliens do not suffer any disability in proceedings for the recovery of debts due them. The laws affecting the recovery of debts are equally applicable to all.

Debts may arise either upon goods accepted, or upon goods

bargained for; upon loans of money borrowed by the debtors; upon checks, notes, acceptances, mortgages, or other instrument legally conferring upon the holder a right of deferred or immediate action against the debtor.

All debts, securities for debts, checks, bills, post-office orders, or any other rights or powers which confer upon the possessor or holder the means of procuring future payments of money, are called "choses in action," as distinguished from choses in possession. Therefore, choses in action are a species of property which may be bought, sold, or given away, like any other personal property, for the benefit of the purchaser or recipient.

As soon as a common debt is completely incurred, the creditor's right of action immediately accrues; and in all actions of contract, time runs from the breach, and not from the making, of the contract. In actions of accounting between principal and agent, time runs from the demand made.

The statute of limitations runs from the time the action might have been brought. A claim for common debt can not be enforced more than six years after it has been incurred or acknowledged. Part payment within six years takes the case out of the statute of limitations, and payment of interest within six years has the like effect.

Lapse of time does not extinguish the debt, for all the statutes do is to bar the right. Hence, unless the statute of limitations is pleaded as a defense, the verdict may be given for the creditor.

A judgment recovered in a foreign country is powerless to in any way keep alive a debt in Great Britain and Ireland, after a lapse of six years from the date when it was first incurred. A judgment recovered in a foreign country is considered in Great Britain and Ireland only evidence of a debt, and the debt must be sued upon in the ordinary way.

The county courts have jurisdiction in actions of contract where the debt does not exceed £50 (\$243.33), and the proceedings must be instituted in the court of the county in which the defendant or debtor resides.

If the creditor succeeds in the county court, the defendant has to bear the following costs, in addition to witnesses' expenses, etc. :

Amount of decree.	Costs.		
	£ s. d.		
Not over £2 (\$9.73).....	0 6 9		\$1.64
Not over £5 (\$24.33).....	0 13 0		3.16
Not over £10 (\$48.67).....	0 14 0		3.40
Not over £20 (\$97.33).....	1 3 0		5.60
Not over £40 (\$194.66).....	1 19 0		9.49
Not over £50 (\$243.33).....	2 19 0		14.36

Proceedings can be instituted in the superior courts for recovery of debts when the amount exceeds £20 (\$97.33), and such proceedings are usually taken. They must be instituted in the superior courts when the amount is over £50 (\$243.33).

The proceedings commence by an action, to which the defendant enters an appearance. The creditor then files his statement of claim, to which the defendant files his defense; subsequently the case is listed and tried either before a judge and jury or a judge alone. Either party can claim a jury to decide all questions of fact.

The expenses of the action, whenever the verdict is secured, are paid by the defendant or party against whom the verdict was obtained. There is no recognized or fixed sum for costs and expenses, as the solicitors and counsel charge according to a fixed scale of charges for each step taken and for all other professional services rendered. The principal items in the expenses are the fines to counsel. The costs may vary in amount from £35 (\$170.33) up. They are not affected in any way by the amount involved in the action.

Foreign creditors are at a disadvantage in recovering debts, owing to the fact that their attendance and the attendance of their witnesses is necessary to prove the debt, unless the evidence can be taken on commission. In this case, the expenses are higher.

COLLECTION OF DEBTS IN GERMANY.

The following summary of the German laws relating to the collection of debts by aliens was prepared by Consular Agent Harris, of Eibenstock, in compliance with a request by the director of the Philadelphia Museums, to whom copy of the report has been sent.

In Germany, all small suits which amount to \$75 or less go before the *Amtsgericht* (ordinary court of justice). A lawyer is unnecessary. (Paragraph 23, *Civil prozess ordnung für das deutsche Reich*.) This court is presided over, as a rule, by a single judge, who deals with all sorts of petty suits. All amounts above \$75 must go before the *Landgericht* (provincial court of justice). A lawyer is obligatory. This court is composed of several judges with a president. The plaintiff must deposit beforehand a sum sufficient to cover all the costs, in case the suit turns against him. Not only can the court demand this deposit, but the opponent as well.

The question now arises, What steps should an American take who is trying to collect an outstanding debt? If he has no acquaintances in the town or city where the debt exists, he should address himself directly to the *Amtsrichter* for information, and in due time, I am

satisfied, a reply will be received. If the amount is less than \$75, the Amtsrichter will take charge of the matter and in time adjust it himself. If the amount is more than \$75, it will be placed in charge of a Rechtsanwalt (attorney), who will take the case before the Landgericht.

Definite laws governing attorneys' fees were passed July 7, 1879, and put in force October 1 of the same year. The same were introduced into Helgoland January 4, 1891. Fees are charged in proportion to the actual value of the case in hand. The following table (quoted from Gebührenordnung für Rechtsanwälte) will give an idea of these charges. It must be borne in mind that these fees do not cover court charges (which, by the way, are not high) and other incidental expenses. These figures represent only the fee for attorney.

Amount.	Charge.	Amount.	Charge.
For sums of \$5 and less.....	\$0.50	\$285 to \$380.....	\$8.00
\$5 to \$15.....	.75	\$380 to \$500.....	9.00
\$15 to \$30.....	1.00	\$500 to \$640.....	10.00
\$30 to \$50.....	1.75	\$640 to \$800.....	11.00
\$50 to \$75.....	2.50	\$800 to \$1,000.....	12.00
\$75 to \$112.....	3.50	\$1,000 to \$1,285.....	13.00
\$112 to \$155.....	5.00	\$1,285 to \$1,600.....	14.00
\$155 to \$215.....	6.00	\$1,600 to \$1,850.....	15.00
\$215 to \$285.....	7.00	\$1,850 to \$2,380.....	16.00

For all amounts between \$2,380 and \$11,900, a fee of \$1 will be charged for every additional \$476; for amounts between \$11,900 and \$23,800, a fee of 75 cents for every additional \$476; and for all amounts above \$23,800, a fee of 50 cents for every \$476.

If an attorney has been put to any expense, this, of course, must be refunded in addition to the regular fees. If an attorney has to do any traveling, \$5 per day must be allowed him extra for this purpose.

There are no special drawbacks, as is usual in such matters. There is more or less procrastination; but, on the whole, I am of the opinion that an American going to law will find that his interests will be guarded as impartially as those of a native, and that the decision will be in harmony with justice and German law.

COLLECTION OF DEBTS IN BELGIUM.

In response to a request from the Philadelphia Commercial Museum, Consul-General Lincoln, of Antwerp, under date of October 25, has forwarded the following:*

Actions for the recovery of a debt of a mercantile nature can be brought before the tribunal of commerce. The decision here rendered can be appealed from in all cases where the amount of the judgment exceeds 2,500 francs (\$483). In the case of actions other than those brought upon bills of exchange or acceptances, the plaintiff must summon his opponent before the court by the sheriff. The action is heard in its turn according to its place on the calendar, except when unusual necessity for an early hearing is alleged, in which case its hearing can be advanced. Unless the action concerns a debt acknowledged by the debtor, the burden of proof is thrown upon the plaintiff.

The judgment rendered must be served in the form of a writ on the defendant, but the same is not put immediately into execution, a certain delay being granted. When the defendant does not appear, judgment can be rendered by default, which fact must appear upon the record; and the defendant has the right in the case of judgment so obtained to appear and open the same up to the time of the execution.

Every judgment which contains any conditions other than payment of damages and interest is subject to registration fees.

The law relating to bills of exchange, etc., in Belgium is found in the statutes of the 20th of May, 1872, while the code of civil procedure lays down the methods pertaining to all other debts. Between tradesmen and for commercial debts, the creditor has the right, provided no agreement to the contrary exists, to draw bills of exchange on his debtor for any sum which does not exceed the amount of the debt in question, and the drawee is compelled, according to article 8 of the law in question, to accept the same. The refusal to accept is established by an act of protest (article 9). On the notification of the protest for nonacceptance, the indorsers, drawer, and guarantor are compelled to furnish security for the payment of the bill when due (article 10).

Within a certain limit of time, the length of which depends upon the place where the bill was drawn, the bearer must exact its payment, its acceptance, or acknowledgment. The period of time is calculated from the date of the bill, otherwise the drawer and in-

* Copy has been sent to the museum.

dorsers are released. The bearer of the bill of exchange must exact its payment on the day it falls due (article 52).

The refusal to pay must be established by protest not later than the second day after the bill falls due. A protest for nonacceptance or nonpayment is made by the sheriff according to the terms of the law of July 10, 1877, or, in places where no sheriff resides, by other officers designated by the Government.

The protest is registered and inscribed in a book drawn up according to article 443 of the commercial code. An abstract of the act of protest is delivered to the debtor.

The bearer of a bill of exchange protested for lack of payment can make use of his right to bring action against the drawer or either of the indorsers individually (section 55), or against the indorsers and drawer collectively. If the bearer brings action against the last indorser alone, he must, except in the case of long distance between the residence of the person named and the place of payment of the bill, summon him to appear within fifteen days' time following the date of protest (section 56). Action against the indorser in Belgium (section 57), where the bill is made payable without the Kingdom, must be brought within one to eight months, according to the place where the bill is payable. If the bearer makes use of his right to bring an action against the indorsers and the drawer collectively, he must exercise this right within the time fixed by articles 56 and 57.

After the expiration of the time within which action should be brought, the bearer of the bill loses all right of action, as well against the indorsers under act of protest for nonpayment as against the guarantor. The same is true of actions between late and prior indorsers; the same rule applies also to the bearer, in case it can be shown that at the time of the maturity of the bill the money was on hand to take up the same. The bearer in this case can only have recourse against the drawee.

All right of recovery on a bill of exchange is lost after a lapse of five years, the time beginning to run two days after the date of falling due or with the date of the last suit brought (section 82). The provisions of law above cited are applicable to acceptances as well as to sight drafts.

The tribunal of commerce is competent to adjudge all matters concerning bills, checks, notes, etc.

To attach the debtor's property, a writ of execution is required. Action must be brought before a justice of the peace or the civil court—before the first named in cases where the sum involved is less than 300 francs (\$57.90); before the second if a greater sum is involved. In the first case, an appeal from the sentence can be made if more than 100 francs (\$19.30) is in question; in the second case, if

over 2,500 francs (\$482) is involved. Every decision in the last resort can be appealed to the court of cassation, which renders judgment only on the points of the law involved; never on the facts.

There is no special procedure for the recovery of civil debts.

In the case of action brought by a foreigner before the civil tribunal, the defendant has the right to insist upon his furnishing a bond, but not in the case of actions in the tribunal of commerce.

No fixed tariff of charges exists for the collection of debts.

COLLECTION OF DEBTS IN CAPE COLONY.

The following report was prepared for the Philadelphia Museums (to which copy has been sent) by Consul-General Stowe, of Cape Town:

The Roman Dutch law, as it was in Holland at the time of the capitulation of this colony to England in 1806, is in force here, subject to subsequent changes by act of Parliament, or to modifications introduced by local customs. Comparatively few changes in the general principles of the law affecting judicial practice have been made, and the law of Holland on this subject still serves as a guide, not only in this colony, but also in the neighboring colonies and republics; indeed, throughout South Africa.

The procedure to be followed by aliens in the recovery of debts in this colony is practically the same as has to be followed by domiciled citizens, with this exception: A plaintiff domiciled in the colony can not be compelled to give security for the costs of the action, be he ever so poor; nor can a defendant be called upon to give security. But a nonresident plaintiff having no landed property in the colony, unmortgaged or not of sufficient value over and above the mortgage, must give security for costs; and a nonresident defendant who makes a claim in reconvention must give security to answer the judgment and costs.

In order to enable solicitors here to recover debts on behalf of alien clients, the following is necessary:

(1) In unliquidated cases, clients must send a properly legalized power of attorney authorizing some solicitor here to institute proceedings on their behalf according to law, and generally to do whatever may be necessary in the premises; also, a correct specified account showing each item due. In such cases, it might be necessary, in order to obtain evidence, to examine witnesses on commission in America. It rests, however, with the discretion of the court whether a commission to examine witnesses abroad shall be granted or not. If a commission be not granted, it would be necessary for

the witnesses to journey to this colony to give evidence. It would therefore be advisable for alien creditors, whenever possible, to obtain some acknowledgment of debt from debtors before delivering goods to them.

(2) In liquidated cases, clients must send power of attorney and the document upon which the claim is founded. This document, being an acknowledgment of debt, is *prima facie* evidence, and therefore requires no proof.

In unliquidated cases, proof of the debt is required; for, until proved, the debt is not presumed to be due.

The courts are: (1) Magistrates' courts; (2) high courts; (3) supreme court, which is also an appeal court.

Magistrates' courts have jurisdiction:

(1) In all cases founded upon any bill of exchange, promissory note, or other written acknowledgment of debt, commonly called a liquidated document, in which the sum demanded shall not exceed £250 (\$1,216).

(2) Up to £100 (\$486) in unliquidated cases for price of merchandise, goods, or other movable property; and up to £20 (\$97) in all other unliquidated cases.

(3) No magistrate shall have jurisdiction in or cognizance of any action or suit wherein the title to any lands or tenements, or the title to any fee, duty, or office is in question, or any action or suit to try the validity of any will or other testamentary instrument, or any action or suit whereby rights in future can be bound.

Costs in the magistrates' courts are fixed by tariff and are low, amounting to at most a couple of pounds sterling.

High courts have jurisdiction in all suits arising in their own districts.

Supreme court has jurisdiction in all suits arising anywhere within the colony.

There is an appeal from the magistrates' courts to the high courts or supreme court. In certain cases, there can be an appeal to the Privy Council in England from the supreme or appeal court.

In order to appeal to the Privy Council, the amount in dispute or the matter at issue should be above the value of £500 (\$2,433); or the judgment should involve a question of property of the value of at least £500; or, if the case be one of civil right, it should amount to the value of £500.

Costs in the high courts and supreme court are considerable and can not be fixed, depending on the nature of the suit, number of counsel employed, number of witnesses called, etc.

Costs are usually paid by the unsuccessful party. Of course, if he is not in a position to pay, the successful party would have to pay the cost of his own counsel and solicitors.

COLLECTION OF DEBTS IN BRITISH GUIANA.

The following memorandum of the law in British Guiana with respect to the collection of debts by aliens was prepared for the Philadelphia Commercial Museum by Consul Moulton, of Georgetown, and transmitted under date of November 3, 1898:*

In British Guiana, by the effect of the supreme court ordinance, 1893, and the rules of court passed thereunder, based upon the rules of the supreme court in England, the procedure for the collection of debts has been assimilated to that in force in the latter country.

Actions (other than those in which procedure by summary citation is followed, as mentioned below) are commenced by filing a claim and serving a citation, to which appearance must be entered within ten days after service. Service must be effected personally if practicable; but, if not, an order for substituted service can be obtained, or leave to effect service out of the jurisdiction.

In all actions where the plaintiff seeks only to recover a debt or liquidated demand in money payable by the defendant, with or without interest, arising (1) upon a contract expressed or implied (as, for instance, upon a bill of exchange, promissory note, or check), or on a bond, or contract for payment of a liquidated sum of money; or (2) on a statute where the sum sought to be recovered is a fixed sum of money or in the nature of a debt other than a penalty; or (3) on a guaranty, where the claim against the principal is in respect of a debt or liquidated demand only; or (4) in actions for the recovery of land with or without a claim for rent or mesne profits by a landlord against a tenant whose term has expired or has been duly determined by a notice to quit, or against persons claiming under such tenant—the plaintiff may file his claim in a summary form and cite the defendant by a summary citation to appear on a fixed day, not less than ten days after service, to see the plaintiff admitted to recover his claim and costs forthwith by summary execution.

In default of appearance to a summary citation, the plaintiff obtains immediate judgment on filing an affidavit verifying the cause of action.

If appearance is entered to a summary citation, the plaintiff may, on an affidavit verifying the cause of action and stating that in the belief of the deponent there is no defense to the action, move for liberty to enter final judgment, the motion being returnable not less than four clear days after service of notice thereof. Against such application the defendant may show cause by affidavit. If prima

* Copy has been sent to the museum.

facie a good defense is disclosed in such affidavit, the defendant will be given unconditional leave to defend, and the action will proceed as in cases not commenced in summary form. If, however, a prima facie case is not made out, the plaintiff will have immediate judgment. If the defense shown applies to part only of the plaintiff's claim, he will obtain judgment for the part admitted, leave to defend being given as to the remainder. In doubtful cases, leave to defend may be given conditionally upon payment into court of the amount claimed, or security being given for it, or on such other terms as the court may think fit.

It will be seen that the class of claims capable of being recovered by summary process is a wide one and covers nearly all ordinary commercial transactions.

If no appearance is entered to a claim in the ordinary, as distinguished from summary, form, the plaintiff may set the case down for hearing *ex parte*, when he can obtain judgment on proving his case. Appearance may, however, be entered at any time before such hearing. After appearance, contested actions proceed to trial after the close of the usual pleadings. There are at the present time no arrears in the civil business of the court, and, as the only interruptions to the trial of civil causes occur from the sessions of the criminal courts and the long vacation, extending from July 1 to September 30, it may be taken that even a contested action will be heard and determined within from four to six months after its commencement, and usually less, especially if it falls within the limited jurisdiction of the court.

Actions where the amount of the claim, whether for debt or damages, or the subject-matter of the action does not exceed \$2,500, and all actions in respect of such claims as may be recovered by process of summary citation, fall within the limited jurisdiction of the court and are heard and determined by a single judge. The trial of such actions is generally reached within two or three months.

Other actions are determined by the full court, consisting of a chief justice and two puisne judges.

An appeal lies to the full court from the decision of a single judge in respect of a sum of \$250 or upwards, and from the full court to the judicial committee of the privy council in England where the judgment appealed from is in respect of a sum or matter at issue above the amount or value of £500.

All judgments in British Guiana for an ascertained amount carry interest at the rate of 6 per cent per annum.

In actions for sums not exceeding \$500, the costs recoverable from the defendant by a successful plaintiff are fixed at 10 per cent on the amount of the claim, with all necessary disbursements. In actions

where the subject-matter exceeds that sum, the costs are taxed according to a statutory tariff, and would amount, inclusive of disbursements, to from \$120 to \$150 in the case of a judgment obtained by process of summary citation, and to from \$300 to \$500 in the case of a contested action before the full court when not unusually complicated or protracted. In all actions the subject-matter of which exceeds \$250, a barrister is required to act with a solicitor, and, by the custom of the profession, the tariff costs are divided equally between them. In contested actions or cases of exceptional difficulty, retaining fees, varying in amount with the nature of the case, are usually paid to both on the commencement of proceedings.

An important protection to creditors in British Guiana lies in the fact that all immovable (real) property is held by registered title, and can be transported (disposed of) or mortgaged only after three successive advertisements in the Official Gazette of the colony, published weekly, during which period any creditor for a liquidated amount has the right to oppose and prevent the passing of the transport or mortgage advertised, unless the amount of his claim is paid into court or security for it given.

A debtor can also be arrested on a warrant and prevented from leaving the colony by any creditor to whom he owes a debt exceeding \$100. The arrest can not be sustained if the debtor finds security or consents to judgment for the claim, but the inconvenience of the arrest is often a material assistance to obtaining payment of a debt.

No action can be commenced by or on behalf of a plaintiff (whether an individual or a corporation) residing out of the colony, unless he is represented by an inhabitant of the colony holding a power of attorney authorizing him to take legal proceedings.

A plaintiff residing out of the colony may also be required to find security for costs, either by a bond with two or more sureties or by deposit in court of a sum in cash not exceeding \$250.

Powers of attorney executed in a foreign country must be executed in presence of two witnesses, who must subscribe their names thereto, and before a notary public, who must certify under his signature and seal that the power of attorney was executed by the grantor in the presence of such witnesses and before him. And the fact that the person before whom the power of attorney is executed is a notary public of such foreign country must be certified and legalized under the hand or seal of any officer of state, court, judge, or magistrate of any such foreign country or of any ambassador of England, or his locum tenens, or of any British consul or his locum tenens residing or being in any such foreign country; or such power of attorney may be executed before two or more witnesses, who must subscribe their names thereto, and one of them

must make affidavit or declaration proving such execution in any of the following ways—that is to say:

(1) Before any ambassador or officer of state of Her Majesty, or before any British consul or vice-consul, or before any person acting for such officer and attested by the signature or seal of such ambassador, officer of state, consul or vice-consul, or such person; or

(2) Before any notary public, and attested by the signature and seal of such notary public; and the fact that such notary public is a notary public in the place where the affidavit is sworn or declaration made must be certified by the signature or seal of any ambassador or officer of state of Her Majesty or before any person acting for such ambassador, officer of state, or consul or vice-consul.

These requirements apply also to any contract, deed, agreement, or other instrument in writing, and must be strictly complied with to enable the document to be given in evidence. In the case of a claim by a corporation, in addition to the power of attorney, a copy of its certificate of incorporation and memorandum, and articles of association attested as true copies in accordance with the above requirements, should also be forwarded, and the signatures of the directors or other officers of a corporation who attest the affixing of its seal to the power of attorney must be proved in the same way.

Actions upon bills of exchange, promissory notes, or other writing not relating to lands must be brought within six years from the time at which the amount claimed has become due; but every action for any movable property or upon any contract, bargain, or agreement relating to movable property, or to recover money lent without written acknowledgment, or upon any account or book debt, or to recover any salary or the value of any goods sold or delivered, must be brought within three years next after the cause of action has arisen.

COLLECTION OF DEBTS IN GUATEMALA.

In reply to inquiries by the Philadelphia Commercial Museum,* Consul-General Beaupré writes from Guatemala, January 20, 1899:

Unfortunately, there is no pamphlet containing the laws governing the collection of debts. They are scattered through the code of civil procedure, and it would be a matter of considerable labor to prepare a proper digest of the laws on this subject, especially as there have been decrees enacted making material alterations, which are not yet incorporated in the code.

In the collection of debts here, the good or bad faith of the

* The museum has received a copy of the report.

debtor has great influence in the chances of collection, because under the law there are a number of incidents and technicalities that he may make use of if he chooses. If there be an authentic document upon which judgment may be entered, or if the debtor will admit his indebtedness before a magistrate, the difficulties are not great; otherwise, they may be exceedingly so.

Any creditor residing abroad may collect from a party residing in this country, or even from a nonresident, if the credit comes out of a contract in effect here; but neither a lawyer nor anyone else can bring suit for a third party, unless provided with a notarial power of attorney or an indorsement if the document upon which suit is brought is negotiable. The power of attorney requisite must be very carefully drawn, and the signature of the notary before whom it is executed must be authenticated or legalized by a Guatemalan consul.

The delays and expenses depend so much upon the nature of the document held by the creditor, as well as the attitude the debtor may assume in his defense, that it is difficult to state accurately what they would be. The lawyer's fee is 5 per cent of the amount of the indebtedness; or, if the claim is not for money, from \$50 to \$500, to be regulated by the court. There are no court costs.

The difficulties of collections are so great that it is always desirable to place the claim in the hands of someone competent to judge of the circumstances of the parties interested, for it is frequently far more desirable to make a suitable arrangement by securing the debt with collateral, etc., than to attempt to force payment. Nearly all credits might be secured by reasonable guaranty, if the creditors would be willing to spend a small additional amount for an "escritura publica," a legal document made by a notary. The "escritura publica," in case of bankruptcy, has preference over and is payable before notes, book accounts, etc.

The distressingly hard times which have prevailed in this Republic for the past year or two add unusual obstacles to collections, and make more urgent the necessity for obtaining security whenever possible.

Mr. José F. Dougherty, 11a Calle Oriente, No. 6A, city of Guatemala, makes a specialty of recovering payments and is undoubtedly well equipped for that work.

TRADE AND INDUSTRIES IN SOUTH AFRICA.

COMMERCIAL TRAVELERS.

Commercial travelers can now travel on the railways of Cape Colony first class at second-class fares, with the right to 200 pounds of luggage free. Commercial travelers in the colony of Natal will be required to take out a license of £10 (\$48 66) per annum; no license has heretofore been demanded.

PROPOSED PHARMACY BILL.

Much excitement is manifest against the provisions of a "pharmacy bill," not yet passed, which renders it compulsory to disclose the composition of all patent medicines in packages. It is claimed the bill is in the interest of home chemists, who desire to restrict the sale of patent medicines to their own trade, instead of allowing shopkeepers or druggists to sell, as they do now, all over the country.

GOLD OUTPUT.

Reckoning on the basis of the September reports of output, it is stated that South Africa will produce in the current year £15,750,000 (\$76,647,375) of gold, which will place South Africa ahead of all the gold-producing countries of the world.

PROPOSED CYCLE FACTORY.

A cycle factory is being started in Port Elizabeth. An article from the British and South African Gazette, which may be of interest to the manufacturers of cycles in the United States, reads in part as follows:

During the past few weeks; a circular letter has been distributed broadcast throughout South Africa by a firm styling itself "Tarry & Co., general merchants," whose address is given as box 339, Port Elizabeth. The prospectus goes on to state that—

"This company is formed for the purpose of establishing a cycle factory in Cape Colony, with branch depots (and subsequently factories) in Natal and the Transvaal, to make and place upon the South African markets good reliable bicycles at a much cheaper figure than imported machines are, or can be, sold at. The sale of bicycles in South Africa has already assumed very large proportions, but the present high prices debar many from indulging in this most healthful, invigorating, and delightful exercise. The object of this company will be to manufacture in South Africa a machine the price of which shall be within the reach of all."

We are indisposed to occupy space with the absurd claims put forward in the prospectus of the South African Cycle Manufacturing Company, Limited, promoted by Tarry & Co. Bearing in mind that the raw material would have to be imported from Europe; that skilled labor in South Africa is only obtainable at a high salary as compared with rates paid in other countries; and that the laying down of mechanical appliances and their working, for the production of all or any of the

multifarious parts of a cycle, would entail an outlay many times in excess of that in England, where wages are notoriously high—it is obvious that the capital of the proposed company is not only absurdly small for the purpose, even if it be all called up (the promoters content themselves with 2s. 6d. to start with, the balance being paid as required in monthly calls of 2s. 6d.), but is barely sufficient to cover the expenses of the voyage of “a staff of competent and skilled workmen” and the purchase and laying down of the necessary machinery with which to commence operations. How, then, can the company claim to “manufacture in South Africa a machine the price of which shall be within the reach of all” at a “much cheaper figure than imported machines are, or can be, sold at?” Parts can, it is true, be imported and put together at probably less cost than a complete bicycle of repute; but, as the word “manufacture” is specially emphasized in the prospectus, we have only concerned ourselves with the literal interpretation which the word conveys. In our opinion, if the whole or any part of the money asked for has been subscribed by a confiding public, all the return they will get for their investment will be the winding up of the company almost as soon as it has commenced operations.

COPPER OUTPUT.

From January 1 to October 1, there have been extracted from stock 8,591 tons of copper, at an average price of £55 (\$267.65) per ton. The price is higher than for several years past, and the demand exceeds the supply.

GERMAN GOODS IN SOUTH AFRICA.

For the month of September, the imports of German goods into South Africa reached 3,080 tons, as compared with 1,467 tons in September, 1897, or an increase of 109 per cent; but in ten lines of goods only were increases shown. Increases in some of the principal articles were:

Iron and steel goods.....	tons...	147
Iron and steel.....	do.....	386
Iron and steel sleepers.....	do.....	24
Glycerin.....	do.....	365
Bottled beer.....	do.....	89

Decreases are shown in:

Iron and steel rails.....	tons...	410
Railway axles and wheels.....	do.....	100
Sewing machines.....	do.....	9
Copper wire.....	do.....	9
Woolen underwear and stockings.....	do.....	20
Furniture.....	do.....	6
Sugar and molasses.....	do.....	11

Germany received from South Africa in the same month:

Wool.....	pounds...	2, 315, 284
Aloes.....	do.....	15, 232
Flowers, everlasting.....	do.....	4, 480
Feathers, ostrich.....	do.....	1, 120
Lead ore.....	tons...	236
Skins.....	do.....	3

BRIDGES, MACHINERY, AND RAILWAY PLANT.

The Transvaal will order a four-span (100 feet each) steel bridge; Rhodesia, steel work for nineteen girder bridges; and Natal, machinery for a large creamery.

Cape Colony has passed a bill to build 505 miles of railway, 3 feet 6 inch gauge and 2 feet 6 inch gauge.

A demand for small electric plants is increasing, and they are being introduced from Birmingham, England.

J. G. STOWE,
Consul-General.

CAPE TOWN, *December 31, 1898.*

TRADE CONDITIONS IN THE TRANSVAAL.

The following extracts are from a letter to a New York export association (the original has been forwarded) by Consul Macrum, of Pretoria, dated January 7, 1899:

There is a great field in South Africa for the American manufacturer and exporter, there being so many rich concerns here which send practically all their business to Great Britain and the Continent, a large share of which might be diverted into American channels if our exporters and manufacturers had only the same confidence in the dealer here that they have at home. I am convinced that the dealer in South Africa has an equal amount of honesty and undoubtedly more means at his command, the question of remoteness being the only thing against him.

The question has been asked, "Why does the foreign dealer give the preference to European manufacturers?" This may be answered very simply with another question, "Why does the American manufacturer or jobber exact from the foreign customer a settlement of account for goods purchased long before the goods are received and frequently before the goods have ever been shipped, when the European manufacturer is willing to extend a credit for at least thirty days?"

Again, the English and German manufacturers canvass for trade through the medium of clever commercial travelers, who visit the dealer personally, and none of whom carry more than five or six different lines. Above all, they are thoroughly acquainted with every line they carry. Contrast this with our American manufacturer. He makes a contract with an export commission house and sends the house a line of expensive samples, besides inserting a costly advertisement in the columns of its monthly or weekly Export Journal. What is the result? The commission house has on hand from seventy-five to a hundred and fifty different lines of goods, not 5 per cent of

which it knows anything about. Is it possible to handle needles, sideboards, traction engines, firearms, stoves, tacks, railroad cars, hooks and eyes, bicycles, etc., and make a commercial success of it? When I say a commercial success, I mean a commercial success to the manufacturer, not to the commission house, which, it goes without saying, has a very comfortable profit out of the transaction on the advertising alone.

It seems to me a perfectly logical proposition that the sooner our American manufacturer goes directly after the foreign trade with the vim and energy he displays in seeking trade at home, the faster will be his progress.

FOREIGN APPRECIATION OF THE UNITED STATES CONSULAR SERVICE.

Consul-General Mason, of Berlin, on February 2, 1899, writes:

La Revue Diplomatique, the organ of the French diplomatic and consular service, contains, in its number for January 29, an article on the United States consular service which may be of interest to American readers. A translation is herewith submitted:

The Americans are practical men, and their instinct for business is marvelous. Nothing is more characteristic in this respect than the organization of their consular corps. The consular service of the United States is a remarkable instrument of expansion. It is unique and resembles none other. Its duty is that of a sort of bureau of information at the expense of the State. It is recruited principally from journalists, who carry into their official career the trained instinct of observation, the quick grasp of passing events which belong to their former profession. They remain in close and sympathetic touch with their former readers. Their letters, which their colleagues reprint, have the familiarity of an interview. They describe how their family enjoy their new residence, whether their house has an exotic character, and the following Sunday supplement reproduces it with photographs. They address their reports to the Government, but they know that as soon as they are received, the press will reprint them and that the whole country will derive advantage from them.

In some countries, the official printing office leisurely prepares the proofs of consular reports. These are returned for correction by the consuls, and when they finally appear they are no longer of interest. They are of an historic rather than a business character. But the American consul knows that his notes will go without delay immediately to the public, and he gives in them, like a good reporter, information down to the latest hour.

The American consul does not understand that he has a commercial situation to maintain, but always a commercial situation to conquer. His ingenuity is exercised to invent and find new markets, and in his study of ways and means he descends to the most minute details.

For instance, the Americans have wheat to sell. The consul at Amoy proposes to import it into China.* But the Chinese do not eat wheat. They must then be

* See CONSULAR REPORTS No. 218 (November, 1898), p. 443.

taught to eat it. It is noticed that the Chinese "gargoutiers" (cooks) form associations in which they readily copy or imitate each other. The consul suggests that some dozens of these be selected, wheat given them gratis, and they be taught to make a few cheap, simple dishes. The fashion would spread rapidly among the restaurants and from there to the families. Here is an instance of imagination and, at the same time, of practical good sense. The Americans do not lack a certain sentimentality in business. Last year at Caracas, they offered to the President a banquet where were served only dishes prepared from products of American origin. Enterprising and ingenious in the new countries, it is above all in Europe that the consuls of the United States are active and aggressive. Despite their colonial conquests, the Americans have comprehended that the real struggle remains in the old markets; that there are great fields to be cultivated; that there especially is the hard school which will force them to manufacture and sell better than all others.

They have commenced their industrial expansion by striking at the heart of the old industry, in conquering the English firms in the Birmingham market. Their principles and rules are those of sport. The record must be beaten. Their consuls have won the admiration of the English.

"The English merchants," says a journal of Birmingham in October last, "commence to ask why our consuls do not work in the same spirit as the American consuls."

Two months ago, a manufacturer in the United States demanded of the consul at Birmingham the addresses of certain English manufacturers who make seamless steel tubes. The consul, in place of sending the addresses asked for, sent the details of this method of manufacture, to prove that the article could be manufactured in America. These consuls interest themselves immediately after they reach their post in all that surrounds them, just as they did before as journalists. That which they do not know, they learn. One sees by this that the Americans have the art of putting life and initiative into a career where other people rest upon routine and immobility.

Consul Monaghan, of Chemnitz, under date of January 30, 1899, sends a translation of an article in the leading paper of that city expressing similar opinions and praising the efforts of the United States consuls in Italy to extend American trade in those markets. Mr. Monaghan adds that Dr. Reckow, a writer of European reputation, in his book on the reform of the German consular service, says that United States consuls give their Government better service and better information than any on earth.

Consul McFarland sends from Nottingham, under date of February 14, 1899, a clipping from a London journal reporting a discussion in the House of Commons of the British consular reports. One of the members, in a subsequent interview, compared the work of British consular officers with that of the Americans. He said, in part:

The United States Government issues five distinct publications. There are the two large annual volumes, containing reports on trade and commerce, manufactures, finance, customs laws, transportation facilities, etc., with special reference to

opportunities for, or obstacles to, the extension of sales for United States products abroad.

Then there are the monthly CONSULAR REPORTS from the consular and diplomatic representatives of the United States.

Two other publications are issued, the Special Consular Reports, dealing with tariffs, post regulations, money and prices, railways, canals, irrigation, and so on; and Declared Exports, which gives the exported goods to the United States, with their invoice values.

These reports, valuable as they are to the commercial community, have not satisfied the American Government, and, since the beginning of 1898, they have issued a daily edition of the CONSULAR REPORTS, so that within a few hours the manufacturing and commercial communities are in receipt of the information. Here is a report dated January 31, which gives the American engineers notice of the growing market for freight motors in England. It explains the high rates for railway carriage, shows where the English motor manufacturers are failing, and an American agent was landed here in a few days to take up the new industry. Such a report from our English consul would have been months before it reached English manufacturers. It would have been sent in proof to the consul before being issued, and I have known a case in which it was eighteen months before it was published. The newspapers would print it, but it is not available.

Our consular reports should be made promptly accessible in abstract, as well as being published in monthly volumes; we should appoint commercial attachés at the chief consulates, with clear instructions as to their duties; and they should be Englishmen wherever possible, but speaking the language of the country in which they are located. The reports from all these sources should be as widely circulated among those most immediately concerned as possible. The American Government print their advance copies daily, on one side of the paper only, in order that they may be convenient for use by the press. The English journals are quite patriotic enough to give full publicity to such matters, if the information is circulated properly and in convenient form.

Consul Halstead, of Birmingham, on February 20, 1899, says that the trade paper *Paper and Pulp*, commenting on the same subject, concludes:

The United States is ahead of the world in regard to quick consular reports, and to this fact alone can be traced so much of the loss suffered by English traders.

NOTES.

Trade of Spain in 1898.—Consular Agent Mertens writes from Grao, under date of January 30, 1899, that the official returns of trade for 1898 show a decrease in imports, as compared with 1897, of 188,250,000 pesetas (\$28,990,500),* divided as follows: Decrease in raw materials, 130,000,000 pesetas (\$20,020,000); in alimentary substances, 50,000,000 pesetas (\$7,700,000); and in silver bullion, 55,000,000 pesetas (\$8,470,000). On the other hand, the imports of manufactured articles show a gain of some 45,000,000 pesetas (\$6,930,000) as compared with the year 1897. The decrease in exports amounted to 119,750,000 pesetas (\$18,441,500), of which some 44,000,000 pesetas (\$6,776,000) were in manufactured articles, and 153,000,000 pesetas (\$23,562,000) in silver bullion. The exports of raw materials increased by some 8,000,000 pesetas (\$1,232,000), and of alimentary substances, 66,000,000 pesetas (\$10,164,000); these gains being due, says Mr. Mertens, to the high rate of exchange in favor of exporters. The total exports during 1898 were valued at 859,747,000 pesetas (\$132,401,038) and the imports at 595,925,000 pesetas (\$91,772,450), thus leaving the balance of trade in favor of the country, and showing its natural wealth.

Certificates of Identification in Spain.—The following, dated February 17, 1899, has been received from Consul Boyle, of Liverpool:

The Government Board of Trade has just informed the Liverpool Chamber of Commerce that arrangements have been perfected by which there will be a great facilitation of business through British commercial travelers in Spain. The Spanish Government has agreed to accept "certificates of identification" from British commercial travelers when they bear the "seal of state." The Liverpool Chamber of Commerce has been advised by the British Board of Trade that it will attach its "seal of state," without charge, to any certificate of identification which may be issued by the chamber. Under the arrangements between the Spanish and British Governments, this certificate is issued for one year, bears the name and

* The values throughout this report have been reduced to United States currency on the basis of 1 peseta=15.4 cents. This is the valuation given by Consul-General Bowen, of Barcelona, for 1897 (see *Commercial Relations*, 1896-97, Vol. II, p. 743). The nominal value of the peseta is 19.3 cents; the market value has doubtless fluctuated widely, but, in order to avoid confusion in comparing the estimates for the two years 1897 and 1898, the above valuation has been adopted.

signature and full description of the bearer, states for what commercial house he is traveling, and in what line of business. It is assumed that the British Board of Trade has sent similar notices to other chambers of commerce throughout Great Britain. Liverpool is the headquarters of British trade with Spain, and it is expected that the new arrangements as to identification of commercial travelers will lead to a great extension of trade.

Motor-Vehicle Competition at Liverpool.—Consul Boyle writes from Liverpool, February 17, 1899:

In a recent consular report on "Auto-motor freight wagons and freight rates in England,"* attention was drawn to the forthcoming second trial of motor vehicles for heavy traffic at Liverpool. The official notification, containing conditions of the competition, has just been issued. The trials will begin on the morning of Monday, July 31, and will conclude on the evening of Wednesday, August 2. Trial runs will be made from Liverpool over distances from 30 to 40 miles. There will be four classes of vehicles eligible, the minimum loads being 2 tons, 3½ tons, 5 tons, and 6 tons (2,240 pounds to the ton). The vehicles must be propelled by mechanical power alone, but there will be no restriction on the source of the power or the nature of the agents used. The hope has been officially expressed that vehicles from the United States will take part in the competition. Those interested can secure printed copies of the details of the conditions, regulations, etc., on application to Mr. E. Shrapnell Smith, honorary secretary of the Self-Propelled Traffic Association, Royal Institution, Liverpool, England.

British Railroad Charges for Travelers' Samples.—Consul Marshal Halstead, of Birmingham, on February 10, 1899, says:

Messrs. Gormully & Jeffery, manufacturers of bicycles in Chicago, with export headquarters in London, went into the courts here to test the Midland Railway Company's right to charge on travelers' samples. They won their case, and, to avoid replying individually to the numerous business houses who have written them, they have issued the following statement:

The case between the Gormully & Jeffery Manufacturing Company and the Midland Railway Company was fought on November 30, 1897, and result can be seen in the Times Law Reports for December 8, 1897, No. 6, vol. 14. It is too long a case to give the whole in this letter, but we will state briefly what the learned judge said, viz: "That he had no doubt, when the railway companies gave to commercial

*See CONSULAR REPORTS No. 223 (April, 1899), p. 599.

travelers, described by that name, the right to carry more than the ordinary amount of luggage, they did so in order that travelers might take their samples with them. In this case, he found as a fact that Mr. Darke was known to the defendants as a commercial traveler for the plaintiff; they knew that plaintiff was engaged in selling portions of bicycles, or possibly whole bicycles; they also knew that Mr. Darke tendered each of the cases which he was taking with him, not as merchandise or ordinary passenger luggage, but as commercial traveler's samples. The defendants, the Midland Railway Company, were not entitled to extra cloak-room fees or the charge for conveyance."

This may be of interest to manufacturers in the United States of other lines than bicycles.

Canadian Freight Charges for Petroleum.—Under date of February 23, 1899, Consul Brush, of Clifton, says:

On January 6 last, the Canadian Pacific and Grand Trunk railways, which almost completely dominate Canadian railway traffic, issued a new tariff for the transportation of petroleum. Its ostensible purpose was the protection of Canadian petroleum and its by-products against the United States article, and the announcement of a discrimination of at least 50 per cent in favor of Canadian petroleum and by-products was received with some enthusiasm. The independent refiners, however, soon discovered that the new tariff operated to the interest of their powerful competitor, the Standard Oil Company. The oil production of Canada has practically passed into the control of the Standard Oil Company, which declined to sell oil to the independent refineries. The specific duty of $2\frac{1}{2}$ cents and the high transportation charges on petroleum purchased in the United States (whether from independent producers or the Standard Oil Company) made it impossible for them to compete with the trust. The independent refiners appealed to the railway committee of the Dominion privy council, alleging that, unless immediate relief were granted, they would be forced into bankruptcy. The railway committee summoned the representatives of the Canadian Pacific and Grand Trunk lines to appear before them. As a result of the conference, the two trunk lines announce an immediate withdrawal of the objectionable tariff. The independent refiners do not yet consider the victory a final one, but hope that the Government will give their interests full and proper protection.

Copra in Samoa: Freight Rates from America.—Consul-General Osborn writes from Apia, February 4, 1899:

During the last quarter of 1898, no invoices were issued at this consulate. Prior to that time, invoices were issued each month, principally for copra, which was sent by a German firm to San Francisco.

The invoices for the first quarter of 1898 were \$11,276; for the second quarter, \$13,854.86; for the third quarter, \$17,533.70; and for the fourth quarter, nothing. Upon inquiry, I find that the contract of the German firm with the San Francisco merchant has terminated, and that a fair price for the commodity can not be obtained in the United States. I am informed that only a trifle more than the cost of the copra at this place can be obtained at San Francisco. During the last year, Lever Brothers, of Sydney, had an agent here, and competition was sharp. By the last steamer, the agent was notified that he was no longer needed, and that they had constituted the German firm their sole agents. This indicates that the entire product of the islands will from this time go to the colonies or to Europe. The loss of the sale in the United States means a corresponding loss of trade. Rates between San Francisco and Samoa have been such that most American commodities consumed here are sent to Sydney, and thence 2,800 miles to Apia, and delivered here much cheaper than they could be obtained direct from San Francisco. The tariff direct from San Francisco is \$16 per marine ton, and from Vancouver to Sydney \$6 per ton. Possibly, some arrangement could be made by which goods could be sent to Vancouver and thence to Fiji, and then here by the interisland boats, which to some extent would relieve this place from the excessive rates from San Francisco.

Commerce of Hiogo.—Consul Lyon sends from Hiogo, under date of January 16, 1899, copy of a statement of the superintendent of customs of the port, to the effect that the imports and exports together for the year 1898 were valued at 198,253,000 yen (\$99,126,000),* against 162,149,000 yen (\$81,074,500) in 1897. The imports represented 138,133,000 yen (\$69,066,500) in 1898 and 110,741,000 yen (\$55,370,500) in 1897. The exports for the two years were 60,119,000 yen (\$30,059,500) and 51,408,000 yen (\$25,704,000), respectively.

On January 21, Mr. Lyon transmits a clipping from the *Kobé Chronicle*, an English newspaper published at that port, stating that the commerce of Hiogo (Kobé) during the year 1898 was almost 7,000,000 yen (\$3,500,000) in excess of that of Yokohama, thus making Hiogo the leading commercial port in Japan, although the exports do not equal those of Yokohama. The trade returns of Yokohama, it is stated, fluctuate according to the silk market, while the commerce of Hiogo is more general.

* In round numbers.

Communication with the Philippines.—The following, dated Sydney, February 7, 1899, has been received from Consul Bell:

I would report, for the possible benefit of our traveling or commercial people, that three steamship lines plying between Australia and China and Japan are now calling regularly at the port of Manila, Philippine Islands. These are the China Navigation Company, the Eastern and Australian Steamship Company, and the Nippon Yusen Kaisha (a Japanese line). Each of the companies has four fairly good and well-equipped steamers, averaging 2,500 tons, and, as each line makes monthly trips, there is a call at Manila about once in ten days from Australia, and from Chinese and Japanese ports. These are not new lines, but their regular call at Manila has been arranged since the islands came into our possession. There is already considerable business, both in freight and passenger traffic, between Sydney and Manila, and there is great confidence in shipping circles that the trade will soon become very important.

Orange Boxes in Syria.—Under date of February 9, 1899, Consul Merrill writes from Jerusalem, in reply to inquiries by the director of the Philadelphia Commercial Museum* relative to the preparation of orange boxes and the possibility of introducing them in shooks from America, as follows:

The wood for orange boxes is brought from Roumania. It is a very coarse kind of pine. The ordinary length of a box that will contain 150 oranges is 69 centimeters (27 inches); breadth, 34 centimeters (13.3 inches); depth, from 25 to 27 centimeters (9.9 to 10.7 inches). The wood for the side boards is 7 to 8 millimeters (0.27 to 0.31 inch) thick; for the top pieces and the partition in the middle of the box, 17 millimeters (0.67 inch).

The market price for the wood for an orange box is from 68 to 70 centimes (13 to 13.5 cents); the expense for making and nailing the box is from 10 to 15 centimes (1.9 to 2.8 cents); so that a ready-made box would thus cost about 80 to 85 centimes (15 to 16 cents).

Some Swedish wood dealers have recently tried to enter into competition, hoping to control this industry, but, thus far, without success.

If the United States should attempt to furnish these materials, the importations would have to be made just at the beginning of the season—that is, in July, August, or September.

The fact that no direct line for shipping merchandise exists between the United States and Yafa, as well as the unreliability of

*To whom a copy of the report has been sent.

oriental merchants, would have to be considered. The latter is a less serious difficulty than the former.

I desire that any credit for this report should be given to our consular agent at Yafa, Mr. Hardegg.

Passenger Traffic Across the Russian Frontier.—Under date of February 15, Consul Smith, of Moscow, sends the following:

The custom-house department has published the following data of the passenger traffic across the Russian frontier for six months ended December 31, 1898:

Number of Russian and foreign passengers that have crossed the European frontiers with passports and other legitimate documents from	
Europe to Russia	2, 632, 627
From Russia to Europe.....	2, 722, 912
Over the Asiatic frontier:	
From Asia to Russia.....	75, 311
From Russia to Asia.....	48, 816

The arrivals into Russia of passengers with passports exceed the departures by 25,000.

Expositions of United States Goods in Russia.—The Department of State desires to make correction of an item which recently appeared in the papers to the effect that the Minister of Finance of Russia had informed our embassy at St. Petersburg that American products intended for exposition purposes would be admitted free, upon the condition that a sum corresponding to the amount of the duties on the products be deposited as a guaranty; and that this sum would be returned in case the products should be exported within a certain time.

The action of the Russian Government was not taken in view of a general proposition that American manufactures should be admitted free for purposes of exposition, but was in view of a suggestion previously made that a special exposition in some designated Russian capital, for a limited time only, of American products and manufactures might be organized by American exporters with the sanction of the United States Government and the permission of the Russian Government. The Russian minister's statement to the United States embassy at St. Petersburg had reference only to the treatment of goods sent to that exposition, should the proposed project be realized. It has no reference to any general admission of American goods for purposes of commercial display, and exporters should be cautioned not to attempt to send any goods or valuable samples to Russia on individual account under the impression that they will be bonded for reexportation in the manner described.

The impression seems to be prevalent that the United States Government is about to open rooms for the exhibition of samples of goods in Russia, and many inquiries are made on the subject. The report is probably based on a statement by Consul Rawicz, of Warsaw, appearing in *Commercial Relations*, 1896-97, Volume II, page 729 (also in *CONSULAR REPORTS* No. 208, January, 1898), to the effect that the Exporters' Association of America was about to open in Warsaw a sample room for the exhibition of American manufactures.

Manufacture of Marmalade in Scotland.—In reply to inquiries by a California company (to whom the original report has been sent), Consul Higgins, of Dundee, under date of February 14, 1899, says:

The manufacture of marmalade forms a considerable industry in this city. It is made in two kinds—known to the trade as “marmalade” and “home-made marmalade.” In the former case, all the white substance adhering to the skin is retained; while in the quality known as “home-made,” this is carefully removed and the outer skin but sparingly used, giving the preserve the appearance of a jelly. The skins are cut in quarters by hand, and parboiled in barrels arranged in a line and having a steam pipe running along the top, from which branches pass down the center of the barrels. Seeds and fibrous matter are removed by machinery. Bitter oranges only are used, and come from Spain. In the best qualities, pure sugar is used; in the cheaper varieties, inferior sugar mixed with glucose in a proportion varying from $3\frac{1}{2}$ to 7 pounds for every 100 pounds of sugar. The cost of a 15-horsepower boiler is \$973. This will supply heat to six pans, from which 5 or 6 tons a day can be turned out. Jam-boiling pans of 60 pounds pressure cost \$67; of 90 and 120 pounds pressure, \$76 and \$85, respectively. These are of the same size, the additional cost being due to the heavier copper for the high pressure. A small horizontal engine with governor costs \$171; chipping machine for skins, \$124; pulping machine, \$110; machine for “home-made” marmalade, \$124; shafting, hangers, and drums, \$42. These prices are free on board steamer at Dundee.

Berlin Congress for Suppression of Tuberculosis.—The Department has received from the German embassy, under date of February 26, 1899, the programme of an international congress to be held at Berlin from May 24 to 27, 1899. The note accompanying the programme says, in part:

The object of the congress will be to facilitate efforts for the prevention and cure of tuberculosis, to lead said efforts into the right channel by a discussion of their

proper scientific basis, and to bring about the greatest harmony possible as regards the most suitable measures. The subjects to be discussed comprise: Propagation, ætiology, prophylaxis, therapeutics, and management of hospitals. The discussion will be in the German language, although, by permission of the president, another language may be used.

Inasmuch as the effort to stamp out tuberculosis as an endemic disease is now being made in almost all countries, as it is in Germany, it is to be presumed that foreign countries generally will be interested in the work of the congress.

The ambassador sends copies of a circular issued by the German central committee for the erection of hospitals for persons with diseased lungs, and requests that societies interested in the prevention and cure of tuberculosis be informed. He also transmits an invitation to the United States to send semiofficial delegates to the congress.

Belgian Congress of Life-Insurance Doctors.—Consul Roosevelt, of Brussels, writes, on February 14, 1899:

The first international congress of doctors connected with life-insurance companies will be held at Brussels from the 25th to the 30th of next September. All Europe and the United States will be represented at this congress, which proposes to establish universal formulas for the examination of persons desiring to be insured. As a result of the congress, it is hoped that permanent offices will be created in every country composed of five medical members, who will see that the decisions of the congress are observed, and whose work may serve to lessen the difficulties of application.

Adulteration of Coffee and Chicory in Belgium.—The following, dated Brussels, February 13, 1899, has been received from Consul Roosevelt:

The expert commission for examining alimentary commodities recently reported that there were numerous contraventions of the law relative to the trade in chicory and coffee. In consequence, the Minister of Agriculture has again called the attention of dealers and officers concerned to the fact that it is positively prohibited to sell or expose for sale chicory which at 100° C. loses more than 15 per cent of its weight; chicory dried at this temperature leaving in the process of incineration more than 10 per cent mineral matter in pulverized chicory or more than 8 per cent in chicory in grain, the constituent parts of which, soluble in boiling water, will be less than 50 per cent. As regards coffee, no substitute whatever for this commodity can be sold under any denomination comprising the word "coffee," its derivatives mixed, or homonymous, or the names of origin of the natural coffee.

Telegraph Line to Dawson: Temperature in the Yukon.—

Under date of March 16, 1899, Consul Brush, of Clifton, writes:

The Canadian Government has decided to construct a telegraph line to connect the Yukon territory with British Columbia. A party of engineers has left, to commence the work without delay. The plan of the Minister of Public Works is to construct the line of telegraphs between Lake Bennett and Dawson City at once. At the same time, surveyors will examine the country northward from Quesnelle, British Columbia, which is the terminus of the present Government system (old Cariboo line), in order to connect with the line to Dawson.

The ministers have decided that the franchise for the telegraph line to Dawson is too valuable, and too important from the standpoint of the national safety, to be allowed to go into any but Government hands.

The following is given as the official record of the January temperatures at Dawson. They were taken by the Canadian commissioner, the minus sign indicating below zero:

Date.	Mini- mum.	Maxi- mum.	Date.	Mini- mum.	Maxi- mum.
January 1.....	-41	-24	January 14.....	-27	- 6
January 2.....	-34	-23	January 15.....	-18	-17
January 3.....	-34	-31	January 16.....	-25	-22
January 4.....	-35	-31	January 17.....	-25	-23
January 5.....	-41	-32	January 18.....	-30	-23
January 6.....	-41	-12	January 19.....	-30	-21
January 7.....	-13	- 6	January 20.....	-12	- 5
January 8.....	-14	- 6	January 21.....	- 5	+ 2
January 9.....	-25	- 4	January 22.....	-29	-21
January 10.....	-26	- 4	January 23.....	-31	-20
January 11.....	-28	-18	January 24.....	-35	-30
January 12.....	-33	-22	January 25.....	-45	-26
January 13.....	-22	-21			

Indigent Sick in the Yukon.*—Under date of January 31, 1899, Consul McCook, of Dawson City, writes:

The situation as to persons who will be out of food in a couple of months is becoming very serious. Hundreds will be so situated and will have to be helped out when navigation opens. Many have gone out over the ice, while more are remaining, in the hope that they will be able to make something out of claims they own themselves or out of work on claims leased from others. Applicants come daily to this office for relief.

The indigent sick, so far, have been taken care of by the relief

* This report was given to the press before it reached the Bureau of Foreign Commerce for publication.

committee and by the local authorities, the latter seeing the necessity of taking a hand in the relief work. Many of the sick are not paupers in the strict sense of the word; but, being temporarily without funds, are compelled to call on the relief committee and will pay when they receive remittances from the outside. The relief committee, at this date, is unable to extend further aid, as all funds collected have been exhausted, and it is some \$2,000 in debt. The greatest evil, however, will be the large number of people who will have exhausted their supplies, and who will fail to succeed in getting paying claims.

Warning to Investors in the Yukon.—Consul McCook writes from Dawson City, December 31, 1898:

Investors should be very careful of mining properties offered for sale, particularly in some sections of Alaska. Of the many who came here last spring and summer, hundreds drifted down the Yukon and located at Forty Mile, Eagle City, and Star City, Seventy-Mile district. I am credibly informed there are many schemers among these, who get up miners' meetings, elect their own recorder, jump claims already recorded, get their man to give them receipts as record papers, issue prospectuses of water rights, all apparently in conformity with United States mining regulations. They have organized companies, their scheme being to sell their so-called rights to the public. No one should buy anything until perfectly satisfied, by investigation, that the claims or rights are correct. There will be any number of valueless claims offered by promoters.

Machetes in Paraguay.—Consul Ruffin, of Asuncion, on January 31, 1899, says:

There are two kinds of machetes in use here: One with a handle of wood, a blade of iron, and a rounded end; the other pointed, with steel blade and horn handle. The first is used for cutting weeds, the last for cutting small trees, twigs, bushes, herbs, and grass; likewise for chipping wood and making handles and articles for agricultural purposes. They are all imported, none being made in Paraguay. In 1897, the import amounted to 3,997 dozen and was valued at \$8,489 gold. There is no duty. Machetes costing \$8 to \$10 (\$1.50 to \$1.75 gold) a dozen are imported from England; those costing \$21, \$24, and \$28 (\$3, \$3.50, or \$4 gold) a dozen, from England and Germany; those costing \$65 (\$9 gold) a dozen, from the United States. Terms of credit are six months. Banking facilities

with the United States are by means of the Mercantile Bank, which has an agent in New York City. Since the United States will probably supply machetes to Cuba and Puerto Rico, it may be able to obtain a share of the Paraguayan trade as well.

Coal Trade in New South Wales.—Consul Goding, of Newcastle, writes, under date of January 27, 1899:

On January 1, the selling price of coal at Newcastle was raised from 7s. (\$1.70) to 8s. (\$1.94) per ton, and the miners' wages increased in proportion. It remains to be seen to what extent this will affect trade. At present, the majority of the mines are working full time. The weighing question is still unsettled and the outlook is not too promising; but, as a meeting between the miners and the proprietors will be held shortly, many believe that matters will be so adjusted that the mines will continue to be worked. The fact that over 48,000 tons less of coal was exported to the United States in 1898 than during the previous year has attracted considerable attention. The Mexican trade has fallen off by 50 per cent. This is supposed to be due to the development of the coal mines on the Pacific coast of America and the threatened labor troubles here.

Shoe Trade of Hawaii.*—Consul-General Haywood, of Honolulu, on February 28, 1899, sends the following report:

All boots and shoes are imported from the United States, with the exception of Chinese shoes and slippers, which come from China. The importations for the year 1898 were:

From United States.....	\$172,931.93
Great Britain.....	52.54
Germany.....	39.10
China.....	7,174.04

There are no manufactories here. There are some Chinese who make shoes to order, but their output is very small, being confined principally to a poor quality of white canvas shoes.

Circulation of Currency in Japan.—Consul-General Gowey, of Yokohama, on January 30, 1899, says:

An article in the Japan Times of yesterday gives the total amount of currency in circulation at the end of December, 1898, as 285,619,000 yen (\$142,809,000),† against 330,445,000 yen (\$165,222,000) in

* In answer to inquiries by the Commissioner of Labor, to whom Advance Sheets have been sent.

† In round numbers.

1897, 300,445,000 yen (\$150,186,000) in 1896, and 281,997,000 yen (\$140,948,000) in 1895. The currency at the end of 1898 included 197,399,000 yen in convertible notes, 18,135,000 yen in gold coin, 4,109,000 yen in Government notes, 1,866,000 yen in bank notes, and the balance in subsidiary silver pieces, nickel and copper pieces, and subsidiary notes.

Preservation of Rubber Trees in Kongo Free State.—Under date of February 25, 1899, Minister Storer writes from Brussels:

The Government of the Kongo Free State, with the object of preventing the threatened destruction of the india-rubber trees in that country, has promulgated a decree by which it is provided that for every ton of rubber yielded annually there shall be planted not less than 150 trees. A bureau of control of rubber forests is created and is charged with the enforcement of the decree of 1892, which prohibits gathering rubber in any other mode than through incisions in the bark. Infractions of the new decree (which bears date of January 5, 1899) are punishable by fine up to 10,000 francs or imprisonment. Employers and directors of corporations are held personally responsible for the acts of their subordinates. Guide books for the cultivation of rubber are furnished by the district commissioners on request, and agricultural inspectors will be placed temporarily at the service of private owners.

Debts of German Cities.—Under date of January 27, 1899, Consul Erdman sends from Breslau a tabular statement of the indebtedness of different cities in Germany, giving the population and debt per capita, as follows:

City.	Number of inhabitants.	Total of indebtedness.	Amount paid off annually by the sinking funds.	Amount paid annually on account of interests.
Berlin	1,726,549	\$65,067,370.00	\$2,002,651.00	\$2,310,544.00
Per capita.....		37.68	1.16	1.34
Breslau	385,658	12,211,135.00	387,147.00	365,503.00
Per capita.....		31.66	1.00	.95
Dresden	348,020	9,379,699.00	173,875.00	348,694.00
Per capita.....		26.95	.57	1.00
Frankfort.....	239,160	15,561,114.00	283,042.00	533,536.00
Per capita.....		65.07	1.18	2.23
Hanover	220,500	11,984,348.00	132,226.00	392,684.00
Per capita.....		54.26	.60	1.78
Leipzig	409,830	15,391,377.00	126,204.00	545,190.00
Per capita.....		37.55	.31	1.33
Munich	421,800	20,889,389.00	190,692.00	773,833.00
Per capita.....		49.53	.45	1.83

Germany's Foreign Trade.—Consul Monaghan, of Chemnitz, under date of January 18, 1899, writes:

Germany's imports in the years 1889 to 1897, inclusive, averaged, annually, \$1,033,419,800; the exports, \$804,321,000. In 1897, the imports went up to \$1,157,774,800 and the exports to \$901,115,600, or \$124,355,000 more than the annual average for imports, and an increase of \$96,794,600 for exports. Compared with 1889, there is an increase of \$184,445,000 in imports and of \$126,092,400 in exports. This is not abnormal; the population increased from 48,917,000 in 1889 to 53,735,000 in 1897. Still, the figures of 1897 are considerably larger than those of 1889, per capita of population—viz, in 1898, the imports were \$19.88, the exports \$15.84, per capita; in 1897, imports were \$21.55, exports \$16.77.

Demand for Tobacco in Spain.—Consular Agent Mertens, of Grao, writes, under date of February 15, 1899:

Spain's tobacco factories are, to a great extent, dependent upon American tobacco. During the late war, this could not be furnished, and various trials were made with other kinds; but none seemed able to replace the American product. In the month of May, new contracts for tobacco deliveries are made by the company which has the monopoly of the tobacco trade in Spain, and, as it will probably purchase American tobacco again, our merchants should enter into negotiations with them. Already, agents from Germany with samples have arrived in Madrid; and no time should be lost by the United States houses.

Exports from St. Gall to the United States.—Consul-General DuBois writes from St. Gall, February 28, 1899:

The export of embroideries, laces, and handkerchiefs to the United States during the month of February, 1899, is the largest known since the establishment of the consular office here. The total export was \$712,756 worth, and the export for the same month last year was \$499,212, showing an increase of \$213,544. Every available machine, both Hamburg and Schiffli, is in operation, and the great industry is experiencing a season of activity which shows a growing demand for the popular fabrics which they produce. The indications now are that considerably over \$7,000,000 worth of embroideries, laces, curtains, and handkerchiefs will be furnished to the United States by the St. Gall exporters during the present year.

Sulphate of Copper in France.—Under date of March 15, 1899, Consul Skinner, of Marseilles, says:

There is at present a considerable advance in the market price of sulphate of copper, which is quoted in this city at 64 francs (\$12.35) per 100 kilograms (220 pounds). The price named is about 5 francs (96 cents) above the ordinary price for the quantity named. Large quantities of sulphate of copper are used in the wine-growing districts to counteract the pernicious effects resulting from the various cryptogamic diseases to which the vines are subject. During the year 1898, there was exported from the United States sulphate of copper to the extent of 14,529,466 pounds, valued at \$466,244. On these terms, it would seem as though a considerable business might be done in France, especially under existing market conditions. I venture to add a number of addresses of dealers in this line for the benefit of those whom it may concern: Emery, rue des Trois Mages 2; Schlœsing Frères et Cie., rue Armeny 1; P. Millaud Fils, rue Haxo 20.

American Coal in Marseilles (Correction).—Consul Skinner writes from Marseilles, March 15, 1899:

The duty upon coal, as stated in a recent report* from Marseilles, was given as 20 centimes (3.86 cents) per ton. The rate should have been given as 1.20 francs (23 cents) per ton. Considerable interest has been aroused in coal circles here by the probably authentic report that a large consignment of American coal is now being received at St. Michael's, in the Azores. British trade papers have taken the subject up, and it seems to be generally expected that the Americans will soon be taking a practical part in the distribution of fuel in this quarter of the globe.

Wireless Telegraphy in France.—In reply to inquiries by the correspondent of a San Francisco journal (to whom copy of the report has been sent), Consul-General Gowdy writes from Paris, under date of February 14, 1899, that he has had an interview with Mr. E. Ducretet, the noted inventor and constructor of electrical apparatus,† who stated that messages can be at present perfectly transmitted a distance of about 13 miles through space without wire. The messages are dispatched and received by masts 30 meters (99 feet) high at the extreme ends of the distance. One of the principal obstacles encountered was the apparent impossibility of accomplishing the automatic registration of the message. This has been overcome by an instrument of Mr. Ducretet.

* See CONSULAR REPORTS No. 223 (April, 1899), p. 649.

† See CONSULAR REPORTS No. 222 (March, 1899), p. 475.

Sicilian Sumac Trust.—Consul Howe, of Palermo, under date of February 4, 1899, reports the formation of a company, with principal office located at Palermo, which will, after August 1, 1899, control the entire output of sumac from Sicily. The company is organized under the name of "Società per la Esportazione dei Sommacchi di Sicilia—I. & V. Florio & Co.," with a capital of 1,500,000 lire (\$289,500), and is to continue for the term of five years from August 1, 1899. This combine includes every manufacturer and exporter of sumac in Sicily, together with every factory for preparing sumac for market. All sumac exported from Sicily after August 1, 1899, will bear only the trade-mark of the new company, former trade-marks to be discarded.

Horticultural Exhibition in Russia.—A note from the Russian ambassador, dated Washington, February 28, 1899, informs the Department that an exhibition is to be held by the Imperial Russian Horticultural Society at St. Petersburg from May 17 to May 27. Exhibits will be admitted duty free, on condition of their being re-exported from Russia via the frontier station at which they entered. There will be no reduction on the transportation of exhibits from the Russian frontier to St. Petersburg, but exhibits will be conveyed gratuitously from St. Petersburg to the frontier. Each plant must bear a phylloxera certificate. Specially arranged cars will be provided for their transportation. The United States is invited to participate.

Poultry Exhibition in Russia.—The Department has received a note from the Russian ambassador, dated Washington, February 28, 1899, in regard to the poultry exhibition* to be held in St. Petersburg from May 13 to 22. During the exhibition, a competition of incubators will be held. Persons desirous of exhibiting should deliver their incubators not later than April 27 at a place to be indicated by the committee, with accompanying description of construction, directions for use, and price. The percentage of chickens hatched, simplicity and durability of construction, facility of survey, maintenance of a steady temperature, and comparative cheapness will be considered in awarding the prizes.

German Hop Trade.—Under date of February 3, 1899, Commercial Agent Stern, of Bamberg, writes that the exports of hops from Germany during the season of 1898 were 82,270 centners (9,049,700 pounds), against 113,942 centners (12,533,600 pounds) in the pre-

* See CONSULAR REPORTS No. 220 (January, 1899), p. 106.

ceding year. The decrease is mainly to England, leaving Belgium Germany's best customer in this line. Exports to the United States decreased from 11,032 centners (1,213,520 pounds) in 1897 to 3,326 centners (365,860 pounds). The American article, says Mr. Stern, competes successfully with the German, especially in the English market, and it is only a question of time when exports to the United States will be reduced to a mere trifle. The full text of the report has been transmitted to the Department of Agriculture.

High Price of American Meat in Germany.—Consul Erdman writes from Breslau, January 24, 1899, in regard to the expense attending the importation of a box of meat containing six hams and six pieces of breakfast bacon. The weight of the box was about 115 pounds, and Mr. Erdman paid a duty in Hamburg of 10.15 marks (\$2.42) and a local duty in Breslau of 7.65 marks (\$1.82), which, with freight charges from New York, made a total of 43.80 marks (\$10.42). The consul adds:

. It will be seen that it is an impossibility to import American meat into this part of Germany. With the cost of freight and duty, it is much more expensive than German meat.

American Bicycles Wanted in France.—Consul Jackson writes from La Rochelle, February 16, 1899, as follows:

There have been several demands for American bicycles at this consulate. This should be of particular interest to those makers of cycles who have no agents at Paris. Wheels with chains which could sell for \$40 to \$50 and chainless that could be put on sale for \$70 to \$80 would doubtless find a good market here.

United States Rivets Wanted in England.—Under date of January 30, 1899, Consul Marshal Halstead, of Birmingham, writes:

A firm of merchants here doing an extensive trade in American nuts and bolts wishes to make connection also with some reliable firm which manufactures good rivets, cold stamped. I will be glad to hear from some rivet-manufacturing concern.

Steel Butt Hinges and Hardware Wanted in England.—Consul Marshal Halstead, of Birmingham, on February 23, 1899, writes that he has an inquiry from a firm of hardware merchants in a market town of 34,000 inhabitants for the names and addresses of

manufacturers of "patent American steel butt hinges" and the names of any makers of builders' ironmongery. The firm says: "We have come across a quantity of American hardware in this district, and would like to communicate with the makers."

United States Milling Machinery in Canada.—Under date of February 20, 1899, Consul Twitchell, of Kingston, writes:

During two months of last season, the Frontenac Milling Company had two expert millers inspecting flour and corn mills, with instructions to find the best in existence without regard to cost. A complete set of milling machinery manufactured in the United States was selected, and is now being put in position in Kingston. The capacity of the mill is 300 barrels of flour and 500 barrels of corn meal per day. If the machinery works well, I can see no reason why American apparatus should not displace the milling machinery now in use in Canada.

Postal Money-Order Service with Mexico.—Under date of February 11, 1899, Consul Jones, of Tuxpan, writes:

There is much rejoicing throughout this district—and I have no doubt throughout this entire Republic—over the prospects of a money-order postal service between Mexico and the United States. It will be the means, I think, of introducing many of our goods into these markets. The money-order and parcel-post systems open up such a field in Mexico for the mailing departments of our large stores that it will pay our merchants to cover this field with catalogues printed in Spanish. The possibilities in this line can hardly be overestimated, especially if arrangements to facilitate trade are made with express companies.

The well-to-do families of Mexico have long been anxious for our goods, and only the means of getting them has been lacking.

Rope Factory in Mexico.—Consul Thompson, of Progreso, on February 25, 1899, writes:

A large rope and cordage factory has been erected in the city of Merida, State of Yucatan, and is now in full operation, having, it is said, large orders for binder twine from firms in the United States. It is the first and only plant of the kind in the entire Republic, and is, experts say, one of the best equipped plants of its class in the world.

United States Books in Honduras.—Consul Johnston, writes from Utila, February 1, 1899, that he has persuaded the school board on the island to adopt American school books. The English language, and no Spanish, is taught in the schools, and heretofore the books used were published in England.

Tariff Increase in Haiti.—Vice-Consul-General Terres writes from Port au Prince, March 6, 1899, that, according to a decree published on February 25, a surtax of 25 per cent is established on all importations from and after March 14, 1899, the proceeds to be applied to the gradual withdrawal of the paper money now in circulation in the Republic.

Tariff Changes in Antigua.—Consul Hunt writes from Antigua, February 23, 1899, that the legislative council, on the 21st instant, enacted an ordinance repealing the decree of December last, levying additional imposts upon American flours and breadstuffs.*

The additional imposts upon spirituous liquors remain in force.

Brazilian Tariff Changes.—Consul-General Seeger sends from Rio de Janeiro, under date of January 13, 1899, copy of the Brazilian Review (semiofficial), noting the changes in the Brazilian tariff for 1899. The alterations are as follows: Woolen felt hats (class 16, article 501) are raised to 6.300 milreis (88 cents);† those of article 9, class 2, comprising plain felt, rabbit and other skin, castor, and hair hats are reduced to the same rate. All imported goods are subject to payment of 10 per cent of duties in gold coin or its equivalent in bills of exchange. This is equivalent to a virtual increase of the duties established by the tariff of 1898, still in force, of 35 per cent with exchange at 6d. (12 cents), 28½ per cent with exchange at 7d. (14 cents), 23¾ per cent at 8d. (16 cents), 20 per cent at 9d. (18 cents), and 17 per cent at 10d. (20 cents).

Canadian Tariff Changes.—The following, bearing date of March 16, 1899, has been received from Consul Brush, of Clifton:

The chemical compounds known as safety bate and tannin preserver, when imported by tanners to be used exclusively in the tan-

* See CONSULAR REPORTS No. 222 (March, 1899), p. 377.

† Taking the market value of the paper milreis as 14 cents; however, 10 per cent of the duties are to be paid in gold.

ning of leathers in their own tanneries, may hereafter be brought into Canada free of duty, an order in council having been passed placing them on the free list. Cotton yarn, polished or glossed, when imported by manufacturers of shoe laces, will also be admitted free.

Survey for Hankau-Canton Railway.—Consul-General Goodnow, of Shanghai, on March 1, 1899, reports the arrival at that port of the surveying party which has just completed the survey of the proposed railway line from Hankau to Canton, under contract to an American company. No trouble, says the consul-general, was made by the inhabitants of the region. On the contrary, every kindness was shown and assistance given by the local gentry and officials.

Emigration from Switzerland.—Consul Ridgely, of Geneva, on February 13, 1899, says that the steady decrease in emigration from Switzerland to North and South America seems to be a source of satisfaction to the Swiss press. The *Tribune de Genève* says:

It is satisfactory to note that the emigration from Switzerland to America is steadily diminishing. Already last year, there was a considerable falling off in the number of emigrants, and it may be predicted that the figures will show a further decrease this year. There were during the month of January but 101 emigrants, as against 122 in January, 1898.

In this fact may be seen an indication of an improvement in the economical status of Switzerland, particularly in so far as agriculture is concerned.

Canals in Milan.—Consul Jarvis, of Milan, under date of January 20, 1899, reports that the project of covering the canals in that city is being discussed. The circular lines of the canals were once the city limits, but the growth of Milan has brought them into the busy portion, and they obstruct traffic and are undesirable from a sanitary standpoint. The canals possess a water surface of over 17 acres.

Contracts for Board in Germany.—Consul Hughes sends from Coburg, January 31, 1899, advice to Americans intending to reside in Germany for the purpose of studying, etc. The German way of living, he says, is not usually understood, and additional demands for food, fires, lights, or service are charged for extra at the boarding houses, leading to trouble and sometimes to lawsuits. He would

warn single ladies or families coming abroad to have a careful contract with boarding-house keepers, with all details specified. It should be remembered, also, that a written notice of intention to leave must be given in some places several weeks in advance.

Belgian Tax on Glucose.—Under date of February 16, Consul Roosevelt, of Brussels, transmits translation of a royal order published in the official journal, to the effect that partial remission of the excise tax is accorded for glucose employed in the following industries: Spinning, weaving, finishing, dyeing, and tanning; also, in the manufacture of playing cards, wax, blacking, and imitation parchment paper. The tax is fixed at 13.50 francs (\$2.61) per 100 kilograms (220.46 pounds) of dry extract contained in the glucose, and the order took effect February 20.

Phylloxera in Alsace-Lorraine.—Under date of February 24, 1899, Consul Baehr, of Kehl, informs the Department that, in spite of efforts to exterminate it, the phylloxera is still found in many vineyards in that vicinity. The introduction of American vines is said to be the only remedy.

Potato Cultivation in Jersey.—Consul Stephens sends from Plymouth, February 21, 1899, a report by the consular agent at Jersey, Mr. Renouf, on potato growing in that island. The soil, he says, is well adapted to it, and fertilizers are freely used. The Myatt and Royal Jersey Fluke are largely grown for export. About a third of the cultivated land of the island is utilized in growing potatoes, the average for the last five years being 7,818 acres. The produce realized, on an average, \$1,945,256, or rather less than \$245 per acre. The full text of the report has been sent to the Department of Agriculture.

Plowing in Scotland.—Consul Higgins, of Dundee, on February 22, 1899, sends an account of a plowing match near that city. These matches are held for the purpose of encouraging laborers to adopt this occupation. Prizes were given for plowing, for harnessing and grooming, and for "finishing" or cleaning up furrows. Not a few American plows, says the consul, are in use, and opinions are favorable to their further adoption.

Milking Machine in Scotland.—Consul Higgins, writing from Dundee under date of February 14, 1899, notes the use of a milking machine, known as the "Marchand" device, on a farm near the city. The machine has been in use for two years, and the owner indorses it as practical and successful. The cost, he thinks, is about equal to that of hand labor, and the device is most useful when reliable milkers are hard to obtain. Drawings and description of the machine were sent, which, with the full text of the report, have been forwarded to the Department of Agriculture.

Congress in France Against Abuse of Alcoholic Liquors.—The Department has received a note from the French ambassador, dated Washington, March 24, 1899, inviting the United States to participate in the international congress against the abuse of alcoholic liquors, to be held in Paris from April 4 to 9. The subjects to be discussed will comprise medical science and hygiene, political and social economy, legislation, instruction, education, and propaganda.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
E. Schneegans, Saigon.....	Jan. 17, 1899	Rice market.....	Department of Agriculture.
Do	Jan. 31, 1899	do	Do.
Do	Feb. 14, 1899	do	Do.

FOREIGN REPORTS AND PUBLICATIONS.

Trade in Macedonia and Italian Competition.—The following is a summary of a report in the *Bolletino del Ministero degli Affari Esteri*, Rome, October, 1898:

The exports of Macedonia are cereals, tobacco, skins, cocoons, sesamum, opium, and minerals. Of these, Italy receives chiefly corn, cocoons, and tobacco. The importations from Italy are annually increasing. The principal articles are: Oil from Bari, used in the manufacture of soap; olive oil from Tuscany; oranges, citrons, lemons, and limes from Sicily and southern Italy; butter, cheese, rice, macaroni, conserves of meat, pease and tomatoes, confectionery, knitted goods, thread, tissues of cotton, silk, and velvet, hats, shoes, gloves, brushes, and chemical products from Milan; wax matches, wrapping and cigarette paper, hardware, and glass. Salonica is the principal shipping port of Macedonia and also the market for foreign manufactures for the whole country, part of Albania, and the neighboring countries of Servia and Bulgaria. Markets of minor importance, dependant commercially on Salonica, are Serres, Cavalla (most important for the production of tobacco, which in 1897 amounted to 18,025,691 pounds, valued at \$3,956,500), Uskub, Monastir, and Drama.

Three railway lines have their terminus at Salonica. The Oriental line, the oldest, unites this port by way of Uskub with Servia, Hungary, and Austria. The "Junction" unites it with Constantinople by way of Dedeagach, and a road runs from Salonica to Monastir, which, being altogether more than 600 miles long, should be of immense service in a country essentially agricultural, and one which exports the greater part of its products; but, on account of the high freight rates, due to the Government guaranty, it carries only a limited proportion of them. The Turkish Government grants the road enough to cover the running expenses and a moderate profit, so that the company has no interest in lowering the tariff. Districts not half a dozen miles from the road still transport their products to Salonica by beasts of burden and in wagons.

Not many years ago, England furnished this market with all the manufactures of iron, agricultural implements, etc. Now, Germany supplies the greatest part; Belgium, France, and England following in the order given. In cotton textiles, England still maintains her supremacy in certain lines; but she finds a serious competitor in Italy, particularly in medium grades.

Thirty years ago, the importation of articles of pottery and porcelain was exclusively English; now, the greater part comes from other countries, with Germany in advance. This substitution is seen in nearly every branch of manufacture, and markets are stocked with articles of good appearance, but cheap.

The progress of Italian manufactures dates back scarcely twenty years, and already their products are recognized factors in commerce. Italian iron beds compete in quality with those of France; brushes made at Milan and Turin are sold in foreign markets; and the tanneries of Piedmont and Lombardy send out every quality of leather, from the coarsest to the finest. In silk textiles, Italy is gaining ground in an extraordinary manner. Italian banking houses established at Salonica are among the best known.

The exports from the port of Salonica for the year 1897 are as follows:

Articles.	Quantity.	Value.
Cereals.....tons...	80,000	.....
Tobacco.....pounds...	771,610	\$86,850
Skins.....pieces...	2,019,700	.....
Cocoons.....pounds...	551,150	395,843
Wool.....do.....	551,150	71,410
Minerals.....tons...	36,900	115,800

All merchandise imported into this country, of whatever origin, is subject to a uniform customs duty of 8 per cent ad valorem, based on the estimated price of the goods. Harbor dues for the landing of merchandise are as follows:

Description.	Dues.	
	<i>Francs.</i>	<i>Cents.</i>
Ton of 1,000 kilograms (2,204 pounds).....	2.50	48.2
Single packages:		
1 to 100 kilograms (2.2 to 220 pounds).....	.50	9.6
101 to 300 kilograms (223 to 661 pounds).....	1.00	19.3
301 to 600 kilograms (225 to 1,223 pounds).....	1.50	28.9
601 to 800 kilograms (1,225 to 1,764 pounds).....	2.00	38.6
Large packages.....per ton...	3.00 to 4.00	58 to 77
Unloading of difficult packages.....do.....	2.00	38.6

Commerce of Spain in 1898.—In the *Revue du Commerce Extérieur*, Paris, February 18, 1899, are found the following details as to the special commerce of Spain for the year 1898:

Imports.

Articles.	Value.		Compared with 1897.			
			Increase.		Decrease.	
	<i>Pesetas.*</i>		<i>Pesetas.*</i>		<i>Pesetas.*</i>	
Coal.....	32,400,000	\$6,253,200	.....	.....	13,500,000	\$2,605,500
Cotton.....	73,800,000	14,243,400	.....	.....	11,300,000	2,180,900
Staves.....	12,600,000	2,431,800	.....	.....	2,000,000	386,000
Ordinary wood.....	18,100,000	3,493,300	.....	.....	7,800,000	1,505,400
Leather and hides.....	10,100,000	1,949,300	.....	.....	7,300,000	1,408,900
Machines.....	18,800,000	3,628,400	.....	.....	2,700,000	521,100
Boats of iron or steel.....	12,200,000	2,354,600	.....	.....	4,400,000	849,200
Codfish.....	21,000,000	4,053,000	.....	.....	3,300,000	626,900
Wheat.....	13,900,000	2,682,700	.....	.....	20,100,000	4,053,000
Other cereals.....	15,900,000	3,068,700	.....	.....	9,600,000	1,737,000
Sugar.....	3,500,000	675,500	.....	.....	9,700,000	1,872,100
Cacao.....	9,600,000	1,852,800	.....	.....	500,000	96,500
Coffee.....	13,400,000	2,586,200	.....	.....	2,700,000	521,100
Tobacco.....	23,000,000	4,439,000	4,200,000	\$810,600	.....	.....

* Taking the peseta at its nominal value, 19.3 cents. The market value is probably about 15 cents.

Exports.

Articles.	Value.		Compared with 1897.			
			Increase.		Decrease.	
	<i>Pesetas.</i>		<i>Pesetas.</i>		<i>Pesetas.</i>	
Ore:						
Copper	31,000,000	\$5,983,000	2,500,000	\$482,500		
Iron	71,300,000	13,760,900			4,400,000	\$849,200
Copper	25,300,000	4,882,900			3,500,000	675,500
Lead:						
Argentiferous	32,200,000	6,214,600	100,000	29,300		
Other	22,500,000	4,342,500	2,500,000	482,500		
Tissues of cotton	37,900,000	7,314,700			24,000,000	4,632,000
Wool	16,000,000	3,088,000	2,000,000	386,000		
Cork	36,000,000	6,948,000	3,500,000	675,500		
Cattle	12,600,000	2,431,800	5,000,000	965,000		
Shoes	11,100,000	2,142,300			12,200,000	2,324,500
Wheat flour	6,400,000	1,235,200			13,500,000	2,605,500
Raisins	17,200,000	3,319,600	1,300,000	289,500		
Oranges	49,500,000	9,553,500			8,600,000	1,659,800
Olive oil	57,300,000	11,058,900	45,200,000	8,723,600		
Wine, ordinary	137,800,000	26,595,400	22,300,000	4,303,900		
Xérès and like wines	14,200,000	2,740,600	3,000,000	579,000		
Food, preserved	17,600,000	3,396,800	700,000	135,100		
Espadrilles	14,000,000	2,702,000	13,400,000	2,586,200		

All articles of import, except tobacco, says the *Revue*, show a decrease. Exports of olive oil, thanks to an abundant harvest, were exceptionally large; wine shows an appreciable increase; espadrilles (canvas shoes worn in the Pyrenees) were exported in quantities, for the use of the army.

A New Industrial Star.—From the *Revue du Commerce Extérieur*, Paris, January 7, 1899, the following is taken:

The manufacturing and commercial supremacy of Great Britain has, for some years, been threatened. A quarter of a century ago, France was her only serious rival, if she could be called a rival at all. The United Kingdom was the one great economic power in the world's market; very far in the rear, France could be seen, the first of her small competitors. To borrow an astronomical comparison, Great Britain was a sun and France the largest of the planets within its system. In 1872, the total value of English commerce was £669,283,000 (\$3,257,065,720). French commerce, in the same year, was represented by 9,258,000,000 francs (\$1,786,794,000). Germany's foreign trade, according to a valuation perhaps excessive, or the result of abnormal circumstances, was 9,787,200,000 francs (\$1,888,929,600). Since 1872, the preponderance of British manufactures has been maintained, but the balance grows less and less.

In 1877, German products took the lead, surpassing from that time French exports, and entering into direct competition with those of Great Britain. Germany has proved a more formidable adversary than France. But, as France was surpassed in 1877, Germany, in her turn, is conquered by the United States. The struggle for commercial supremacy between Germany and the United States has

not been a long one, so far as exports are concerned. The second place once gained, the United States kept it, and in the special trade, she now takes front rank in exports. These astonishing figures, it is thought, can not be maintained.

Great Britain still remains the first commercial power of the world. An exceptional combination of circumstances was necessary to give this satisfaction to the exporters of the United States. The merchants of the United Kingdom sent over the world £60,000,000 (\$291,990,000) of foreign and colonial productions, against which the United States can oppose a trade of only about £4,000,000 (\$19,466,000). The British commerce of importation is almost three times greater than that of the United States.

Agricultural products still represent by far the greater part of American exportations. However, the development of manufactures is so rapid that foreign economists can not ignore its importance. The situation may still be considered exceptional. In another year, it will perhaps change; but it is probable that it will be more lasting. Meanwhile, the commercial position of Great Britain can no longer be regarded as an inaccessible sun around which circulate planets incapable of rivalry. France was able to approach at a great distance. Germany came nearer; the United States, entering later in the lists, with rapid and enormous strides, has already had the greatest success. Her weapons are effective enough to justify her in hoping for a positive triumph. In the twenty-first century, the commercial and manufacturing supremacy may have passed from London to New York.

Trade in Textiles at Rio de Janeiro.—The *Moniteur Officiel du Commerce*, Paris, October 13, 1898, has a report from Rio de Janeiro, from which the following is taken:

The importation of tissues represents about one-fourth of the total imports of Rio de Janeiro, and may be divided as follows:

	Per cent.
Cottons and cotton cloths	60 to 62
Wools and woolen cloths.....	22 to 25
Flax and jute.....	6 to 7
Silk and silk goods.....	5 to 6

It is proper to point out that, on account of the financial and commercial crisis, and especially the decline in the rate of exchange, from which Brazil is suffering, the importation of foreign tissues has suffered a sensible diminution. The statistics of customs give the entrance of foreign tissues according to the number of packages as follows:

Articles.	1894.	1895.	1896.	1897.
Cotton and woolen cloths.....	70,155	55,116	45,596	26,283
Wools and woolen cloths.....	9,304	11,223	7,111	4,215
Flax and jute.....	1,416	1,609	982	708
Silk and silk goods.....	279	345	303	242

The competition of local manufactures affects only the importation of cotton cloths, which explains the decrease of more than 160 per cent in less than four years.

Railway in French Guinea.—The *Revue du Commerce Extérieur*, Paris, February 18, 1899, gives an account of the projected railway in French Guinea. A second survey has recently been made with a view to establishing a line of communication between the Upper Niger and Konakry. In 1895-96, the preliminary studies for a wagon road were made, with the intention of making Faramah, on the Niger, the terminus of the road. It was ascertained, however, that the Niger is never navigable at this point, and, as a result, the road, in place of following the French-English frontier, must take a more easterly route. The additional length is compensated by the advantage of opening up the mountainous region of Timbo, one of the richest territories of western Africa. This road has been completed for about 65 miles, as far as Mambia. In October, 1897, the preliminary survey for the railway in Guinea was begun, with the result that a road 342 miles long, without viaduct or tunnel, has been outlined. The most important engineering work will be a bridge 196 feet long, over the Kolente or Grande Scarcie. The greatest incline is 9.8 inches per yard, and the curves have generally a radius of 109 yards.

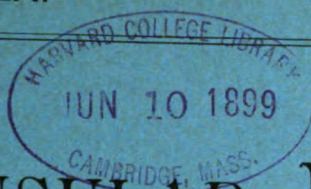
Swiss Manufactures in the World's Markets.—The *Revue du Commerce Extérieur*, Paris, March 18, 1899, quotes from the *Allgemeine Schweizerische Zeitung*, of Basel, as follows:

In the manufacture of machinery Switzerland is perfectly able to compete with Germany, France, and Belgium, notwithstanding the fact that she must get from them her raw materials—iron and coal. That she is able to do this advantageously must be because of the more favorable conditions under which her manufactures are carried on, as regards expense of working; the low rates of insurance against sickness, accidents, and disability; the more modest pretensions of her producers, who are satisfied with less profit; and, above all, the lower scale of wages. Wages are undeniably less in Switzerland than elsewhere, but at the same time living is cheaper. The necessities of life are taxed less on importation; hence the workman is able to enjoy a degree of comfort equal, if not superior, to that of the same class in other countries. In Germany, for instance, seventeen of the ordinary articles of food are taxed 36.57 per cent of their value, and in Switzerland only 6.45 per cent. This, the *Zeitung* adds, is the chief factor in the ability of Swiss manufacturers to compete in the markets of the world.

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CONSULAR REPORTS.

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COMMERCE, MANUFACTURES, ETC.

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WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1899.

PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879, Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries.

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries.

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour.

Vol. 11 (1894).—American Lumber in Foreign Markets.

Vol. 12 (1895).—Highways of Commerce.

Vol. 13 (1895 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Highways of Commerce, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., and Tariffs of Foreign Countries are exhausted, and no copies can be supplied by the Department.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1890.

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Full directions for binding the Consular Reports are given in No. 131, page 663.

VALUES OF FOREIGN COINS AND CURRENCIES

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to \$20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to April 1, 1899, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account

that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891-95 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic*.	Gold and silver..	Peso.....	\$0.96,5	Gold—Argentine (\$4.82,4) and $\frac{1}{2}$ Argentine; silver—peso and divisions.
Austria-Hungary†.....	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{2}$, 1, and 2 milreis.
British North America (except Newfoundland).	do	Dollar.....	1.00	
British Honduras	do	do	1.00	
Chile.....	do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver..	do	.92,6	Gold—doubloon (\$5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	do	Pound sterling..	4.86,6 $\frac{1}{2}$	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	do	Gourde.....	.96,5	Silver—gourde.
Italy.....	do	Lira.....	.19,3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan ‡.....	Gold	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin	.40,2	Gold—10 florins; silver— $\frac{1}{2}$, 1, and 2 $\frac{1}{2}$ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Portugal.....	do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia ¶.....	do	Ruble.....	.51,5	Gold—imperial (\$7.718) and $\frac{1}{2}$ imperial (\$3.80); silver— $\frac{1}{4}$, $\frac{1}{2}$, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Gold	Peso.....	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed.

† The gold standard was adopted October 1, 1892. (See CONSULAR REPORTS No. 147, p. 623.) Values are still, however, frequently expressed in the florin or guilder, which is worth 2 crowns or 40.6 cents.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ See note to table of fluctuating currencies.

¶ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—Countries with fluctuating currencies, 1874-1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*.	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.39,8
Bolivia.....	do.....	Dollar until 1880; boliviano thereafter.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6		
China.....	Silver.....	Haikwan tael..	1.61	1.61				
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†.....	Gold.....	Pound (100 piasters).			4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7	.99,7		
	Silver.....						.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7‡	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands§.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2		
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver.....	Florin.....	\$0.39,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; boliviano thereafter.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....				.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....	.85,8	.81	.78,4	.75,3	.73,4	.91,7
	Silver.....							
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40,2 cents.

XII VALUES OF FOREIGN COINS AND CURRENCIES.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1896.				1897.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2
Central America.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,5	.44,3	.41,2
China.....	Amoy tael.....				.79,3	.76,7	.75,7	.71,7	.66,4
	Canton tael.....				.79	.76,5	.75,5	.71,5	.66,4
	Chefoo tael.....	.75,9	.76,3	.76,9	.75,8	.73,3	.72,4	.68,6	.63,7
	Chinkiang tael.....				.77,4	.74,9	.73,9	.70	.65,1
	Fuchau tael.....				.73,3	.70,9	.70	.66,3	.61,6
	Haikwan tael.....	.80,8	.81,2	.81,9	.80,6	.78	.77	.73,1	.67,8
	Hankau tael.....				.74,2	.71,7	.70,8	.67,1	.62,3
	Ningpo tael.....				.76,2	.73,7	.72,8	.68,9	.64
	Niuchwang tael.....				.74,3	.71,9	.71	.67,2	.62,5
	Shanghai tael.....	.72,5	.72,9	.73,5	.72,4	.70	.69,1	.65,5	.60,8
	Swatow tael.....				.73,2	.70,8	.69,9	.66,2	.61,5
	Takao tael.....				.79,8	.77,2	.76,2	.72,2	.67
	Tientsin tael.....	.76,9	.77,3	.78	.76,8	.74,3	.73,4	.69,5	.64,6
Colombia.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.41,3	.41,2
Ecuador.....	do.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.41,3	.41,2
India.....	Silver rupee.....	.23,3	.23,4	.23,6	.23,3	.22,5	.22,2	.21,1	.19,6
Japan.....	Silver yen.....	.52,9	.53,2	.53,2	.52,8	.51,1	.50,5		
Mexico.....	Silver dollar.....	.53,3	.53,6	.54	.53,2	.51,5	.50,8	.48,2	.44,6
Persia.....	Silver kran.....	.09	.09,1	.09,2	.09	.08,7	.08,6	.08,2	.07,6
Peru.....	Silver sol.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Russia.....	Silver ruble.....	.39,3	.39,5	.39,8	.39,2	.37,9	.37,4		
Tripoli.....	Silver mahbub.....	.44,3	.44,5	.44,9	.44,2				

Countries.	Monetary unit.	1898.				1899.	
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.
Bolivia.....	Silver boliviano.....	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6	\$0.43,9	\$0.43,4
Central America.....	Silver peso.....	.41,4	.40,9	.41,8	.43,6	.43,9	.43,4
China.....	Amoy tael.....	.68,5	.66,2	.67,6	.70,6	.71	.70,2
	Canton tael.....	.68,3	.66	.67,4	.70,4	.70,8	.70
	Chefoo tael.....	.65,5	.63,3	.64,6	.67,5	.67,9	.67,2
	Chinkiang tael.....	.66,9	.64,6	.66	.69	.69,3	.68,6
	Fuchau tael.....	.63,4	.61,2	.62,5	.65,3	.65,6	.65
	Haikwan tael.....	.69,7	.67,3	.68,8	.71,8	.72,2	.71,4
	Hankau tael.....	.64,1	.61,9	.63,2	.66	.66,4	.65,7
	Ningpo tael.....	.64,3	.63	.65	.67,9	.68,2	.67,5
	Niuchwang tael.....	.65,9	.62	.63,4	.66,2	.66,5	.65,9
	Shanghai tael.....	.62,6	.60,4	.61,7	.64,5	.64,8	.64,1
	Swatow tael.....	.63,3	.61,1	.62,4	.65,2	.65,5	.64,9
	Takao tael.....	.66	.66,6	.68	.71	.71,4	.70,7
	Tientsin tael.....	.66,4	.64,1	.65,5	.68,4	.68,8	.68
Colombia.....	Silver peso.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4
Ecuador.....	do.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4
India *.....	Silver rupee.....	.20,1	.19,1	.19,9	.20,7	.20,8	.20,6
Mexico.....	Silver dollar.....	.46	.44,4	.45,4	.47,4	.47,7	.47,2
Persia.....	Silver kran.....	.07,8	.07,5	.07,7	.08	.08,1	.08
Peru.....	Silver sol.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4

* The commercial value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal.....	4.422 gallons.
Ardeb.....	Egypt.....	7.6907 bushels.
Are.....	Metric.....	0.02471 acre.
Arobe.....	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3175 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba.....	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid).....	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine.....	Russia.....	28 inches.
Arshine (square).....	do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7,096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Caffiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333 ¹ / ₃ (1 ¹ / ₃) pounds
Do*.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	117.5 pounds.
Do.....	Darmstadt.....	110.24 pounds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zollverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin." Among merchants in the treaty ports it equals 1.33¹/₃ pounds a voidupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Siam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square).....	8.077 square feet.
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2.6997 acres.
Do.....	Spain.....	1.599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures.....	(See CONSULAR REPORTS NO. 144.)	
Fanega (dry).....	Central America.....	1.5745 bushels.
Do.....	Chile.....	2.575 bushels.
Do.....	Cuba.....	1.599 bushels.
Do.....	Mexico.....	1.5478 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7.776 bushels.
Do.....	Uruguay (single).....	3.888 bushels.
Do.....	Venezuela.....	1.599 bushels.
Fanega (liquid).....	Spain.....	16 gallons.
Feddan.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2.5096 quarts.
Do.....	Mexico.....	2.5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons.
Garnice.....	Russian Poland.....	0.88 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2.471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1.422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2.2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4.9629 bushels.
Korree.....	Russia.....	3.5 bushels.
Last.....	Belgium and Holland.....	85.134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	11 $\frac{3}{8}$ bushels.
Do.....	Spain (salt).....	4.760 pounds.
League (land).....	Paraguay.....	4.633 acres.
Li.....	China.....	2,115 feet.
Libra (pound).....	Castilian.....	7,100 grains (troys).
Do.....	Argentine Republic.....	1.0127 pounds.
Do.....	Central America.....	1.043 pounds.
Do.....	Chile.....	1.014 pounds.
Do.....	Cuba.....	1.0161 pounds.
Do.....	Mexico.....	1.01465 pounds.
Do.....	Peru.....	1.0143 pounds.
Do.....	Portugal.....	1.011 pounds.
Do.....	Uruguay.....	1.0143 pounds.
Do.....	Venezuela.....	1.0161 pounds.
Liter.....	Metric.....	1.0567 quarts.
Livre (pound).....	Greece.....	1.1 pounds.
Do.....	Guiana.....	1.0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.727 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1493 miles.
Morgen.....	Prussia.....	0.63 acre.
Oke.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	21¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.102 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5½ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Seer.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1.6 quarts.
Standard (St. Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suerte.....	Uruguay.....	2,700 cuadras (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	599.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curaçao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Vergees.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
 Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
 Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
 Gram equals 15.432 grains.
 Decagram (10 grams) equals 0.3527 ounce.
 Hectogram (100 grams) equals 3.5274 ounces.
 Kilogram (1,000 grams) equals 2.2046 pounds.
 Myriagram (10,000 grams) equals 22.046 pounds.
 Quintal (100,000 grams) equals 220.46 pounds.
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
 Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
 Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
 Liter equals 0.908 quart.
 Decaliter (10 liters) equals 9.08 quarts.
 Hectoliter (100 liters) equals 2.838 bushels.
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
 Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
 Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
 Liter equals 1.0567 quarts.
 Decaliter (10 liters) equals 2.6418 gallons.
 Hectoliter (100 liters) equals 26.417 gallons.
 Kiloliter (1,000 liters) equals 264.18 gallons.

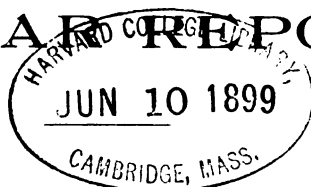
Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
 Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
 Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
 Meter equals 39.37 inches.
 Decameter (10 meters) equals 39.37 inches.
 Hectometer (100 meters) equals 328 feet 1 inch.
 Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
 Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
 Are (100 square meters) equals 119.6 square yards.
 Hectare (10,000 square meters) equals 2.471 acres.

CONSULAR REPORTS.



COMMERCE, MANUFACTURES, ETC.

Vol. LX.

JUNE, 1899.

No. 225.

RUSSIAN PETROLEUM TRADE IN 1898.

I transmit herewith statistics of the oil trade of Baku for the years 1897 and 1898, showing that the business continues to increase in volume, and consequently in importance, at no insignificant rate.

PRODUCTION OF CRUDE OIL, YIELD IN MERCHANTABLE PRODUCTS, SHIPMENTS, AND PRICES.

The statistics show that the average daily production of crude in 1898 was over 20,000 barrels (of 42 gallons) more than in 1897, and, as the average number of wells producing in the former year was 146 more than in the latter, the average increase per well per day was about 140 barrels. Taking the production in the months of December in both years and the average number of wells producing in both months, the production per well was exactly the same—viz, 186 barrels—apparently indicating that there was no falling off in the production of the wells. It must not be overlooked, however, that the production from flowing wells in December, 1898, was almost double that in the same month in 1897, and that, consequently, the fact that the production per well was the same in both months was merely a coincidence and not a safe basis for future calculations.

Going a little farther back than the statistics inclosed (but not beyond those given in previous reports), I find that the average daily production per well was about 226 barrels in 1896, 211 in 1897, and 199 in 1898, which certainly indicates a continued falling off in the production of the wells. I have not the statistics at hand for the production farther back than 1896, but it is my impression, from having

seen them not long ago, that from 1892 till 1896 the average daily production per well did not vary 5 barrels from 225 barrels, and that the first weakening of the wells was noticeable in 1897; and as it increased in 1898, it gives the falling off an appearance of permanency.

The average daily production in 1897 increased over that of 1896 about 12,000 barrels, by the completion of 209 wells, *i. e.*, about 60 barrels per well; the increase in 1898 from the completion of 258 wells was about 20,000 barrels, or about 80 barrels per well. This would apparently refute any idea of a falling off in the production of the wells, without the explanation that in 1898 one well produced about 4,000,000 barrels in less than two months, making about 11,000 barrels per day for the whole year. Consequently, if this phenomenally large well be eliminated, the increase in 1898 from the other 257 wells completed was only about 10,000 barrels, or not more than 40 barrels per well.

The large well mentioned was located in the Bibi-Eibat district, which district is at present not more than 500 acres in area. It is an old section, and has had some big wells and many which, although they could not be called large, were exceedingly good wells for their owners, from depths less than 1,000 feet; but in the last three years the drilling has steadily deepened, the average depth having been 1,169 feet in 1896, 1,420 feet in 1897, and 1,595 feet in 1898. In 1898, 10 wells in this district produced over 7,000,000 barrels from depths between 1,400 and 1,500 feet; and the inference seems reasonable that, although the territory is by no means exhausted, as is evidenced by the many good pumping wells, the gas at the depth mentioned is no longer sufficiently strong to produce large flowing wells, and that consequently, unless deeper strata, rich in oil and gas, be found, the district has seen its best days.

Of the 10 wells alluded to as having produced 7,000,000 barrels last year, 3 produced 6,000,000 barrels, or more than 16,000 barrels per day. Eliminating these 3 wells, the increase last year for the other 255 wells is left at only about 4,000 barrels per day.

I call attention to these facts simply that the statistics may be properly understood, as I believe they mean that unless deeper and equally rich strata be found in this district, or other rich territory to replace it, it will require much more drilling in the future than in the past to materially increase the Baku production.

The Romani district, which is really an extension to the northward of the Sabunchi field, is the newest territory in the Baku fields; but it has been drilled more rapidly than the older territory, because it has been exceedingly rich at greater depths than the older one. It can not be said that this territory is showing signs of exhaustion, because, like Bibi-Eibat, it has many good pumping wells; but, also

like Bibi-Eibat, the drilling is much deeper than in the other districts, for, as will be seen by the statistics, the 21 wells finished in 1898 had an average depth of 1,448 feet, against an average of 1,118 feet for the 22 wells finished in 1897. Consequently, it would seem that the conditions alluded to as existing in the Bibi-Eibat district exist also in this part of the territory—*i. e.*, that it is not at all likely to produce more big wells, unless rich strata are found deeper or the territory is extended.

The other two districts—Balakhani and Sabunchi—which I combine for statistical purposes, although the oldest part of the territory, appear now the most important part, as, while they have been exceedingly rich in oil up to the present, the average depth of the drilling has been much less than in the other districts, having been only 845 feet in 1898, against 815 feet the previous year; and, as the Romani territory was richest at over 1,100 feet, I see no reason to doubt that Balakhani-Sabunchi will also be found to be very rich at somewhere about that depth. In fact, the drilling on the northern side of Sabunchi, which is much deeper than the average of the two districts (nearly the same depth as Romani, the average being reduced by the many shallower wells in the Balakhani portion), has been productive of some very large wells. Only about ten days ago, I learned by telegraph that a well in this territory which had been very productive at shallower depth, having been deepened to about 1,250 feet, was producing at the rate of 60,000 barrels per day. As I have not heard of its stopping, I presume that it is still flowing largely.

The results from drilling in the Balakhani-Sabunchi district show a smaller average per well for the first month of their existence than the other districts, as the average in 1898 was 331 barrels, against 451 barrels the previous year; while the Romani wells averaged 902 barrels, against 750 the previous year; and Bibi-Eibat, 5,075 barrels, against 6,282 barrels the previous year. The total average for 1898 shows a falling off from 1897, as the statistics show it to be 653 barrels, against 813 barrels, notwithstanding the product of the three remarkably large wells at Bibi-Eibat. These figures are, however, calculated to mislead, without explanation, as it is seldom the case that a well does its best the first month of its existence; for all wells require cleaning out after the drilling is finished, which is sometimes accomplished in a week, but oftener requires weeks and even months. This cleaning out is done by pumping with what is known as a sand pump in the United States, but which, as used at Baku, would hardly be recognized by an American producer, as it is much larger than the American instrument, being of as great diameter as will go in the hole, which is from 12 to 18 inches, and 40 to 50 feet

in length. This sand pumping is productive, generally, of much oil mixed with sand, until finally the sand is exhausted and the well starts flowing, sometimes at an incredible rate, as I have seen wells producing 100,000 barrels in twenty-four hours.

The life of such a large well is, however, comparatively short, as it will continue for a month or two without showing a great decline and will then stop entirely, because, it is generally believed, of the collapse of the pipe in it. I do not remember of an instance of one of these immense wells having been brought back to large production after the supposed collapse of the pipe, but many of them have been ordinary producers—*i. e.*, 500 to 1,000 barrels per day—for years after having been cleaned out.

I am fully aware that to the American oil producer the future of the Baku fields is of much more interest and importance than the past; but I am also sure that they will admit that the only means of estimating the future possibilities is a knowledge of the past, and therefore I have from year to year given the fullest statistics possible, that everyone might form his own opinion; and the object of this review of recent statistics is to point out the peculiarities of the production which are not seen from the bare figures. In order to make the review complete, however, I must call attention to the increase in drilling in the past year, as there were 456 wells started, against 303 in 1897, which will, I think, convince those familiar with the business that the future of the Baku trade depends entirely upon the territory, because, if the oil is there, there can be no doubt whatever that the territory will be drilled rapidly enough to maintain, if not materially increase, the production.

The yield in merchantable products of the Baku crude is a matter which has not received as much attention lately as in former years, because, no doubt, it is pretty generally accepted that about 30 per cent illuminating oil can be obtained from it. While I have no doubt that fully that proportion of illuminating oil can be obtained from the crude, I am equally sure that the average result of refining has not been so great in years. I have paid a great deal of attention to this matter, and I give herewith the figures of the yield for the last four years, as it is not worth while going farther back:

Description.	1895.	1896.	1897.	1898.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Illuminating oils.....	26.5	24	22.3	20.5
Lubricating oils.....	2.3	2.25	2.4	2.4
Residuum.....	50.2	56.25	56.5	54.4
Total	79	83.5	81.2	77.3

These results are based upon the gross production of crude, its shipment and stock, and the output of the refineries; but I must explain that there is nothing like as much loss as they indicate, because at least 8 per cent of the gross production is consumed by the wells and refineries as fuel. For this reason, also, they do not accurately indicate the results of refining, as the gross production is not refined, but only about 92 to 93 per cent of it; therefore, the actual proportion of refined obtained from the crude is greater than indicated by the figures.

From the figures given, it would appear that there was a considerable falling off in the yield of the crude since 1896, which must be due to deterioration of the crude or to careless methods of refining. The high prices of the past year make the latter improbable, as it is not at all likely that refiners with crude at 11 to 12 copecks (5.6 to 6.1 cents) per pood (36.112 pounds) would exercise less care in refining than with crude much cheaper. As to the crude deteriorating, I am inclined to believe that there are grounds for that opinion. A few years ago, the purchaser of crude invariably stipulated that it must not be heavier than 30° Baumé, while last year I noticed that in many sales this standard of quality had been lowered to 28° Baumé, and in some cases even to 27° Baumé; consequently, the inference is fair that the crude is growing heavier. A few years ago, the standard for residuum was 25° to 23° Baumé; but recently, sales have been made upon a basis of 26° to 23° Baumé, which brings the minimum specific weight of the residuum very close to that of the crude; in fact, the difference between the two is so small that by a few weeks' exposure of the crude in open reservoirs, it will attain the specific weight of residuum, and, owing to the fact that refined oil has been bringing very poor prices, there is little doubt that much crude was shipped as residuum in the past year. With low-priced refined and high-priced residuum, there is no object in taking much illuminating oil from the crude; but, on the contrary, there is a great inducement to take off no more illuminating distillate than barely sufficient to bring the residuum up to the proper specific gravity.

The increase in the shipment of crude from Baku in 1898, amounting to about 70 per cent, was almost wholly due to the fact that much crude was sold in its natural state for fuel oil; for, as stated above, there was little difficulty in selling crude for fuel, the obstruction being, not the objections of fuel consumers, but the transportation regulations of the Volga, which make the carrying of crude more hazardous than residuum. Therefore, I treat the crude shipped, not as going into the manufacture of other products, but simply as an addition to the residuum of fuel oil.

In my report on the trade for 1897,* I stated that the price of crude at the refineries had reached 42 cents per barrel at the end of the year. At that time, that price seemed much too high to continue a great while, as the production was rapidly increasing and reached the unprecedented average of over 217,000 barrels per day in February, 1898. Notwithstanding this enormous gain in production and a continuous increase throughout the year, the price of crude steadily advanced until it reached 55 cents per barrel about the close of the Volga navigation season, and has practically not receded from that figure; although from the end of October to the middle of March there is practically no shipment of residuum, and the shipment of other products is limited by the export demand and the capacity of the railway to Batum. At present, with the opening of Volga navigation at least a month off, there have been no sales of crude for future delivery reported for some time. Some sales for immediate delivery are daily reported at about the highest price named—viz, 55 cents per barrel—and the newspapers report the market to be very firm, which I can understand, for in previous years at this season all sales, or the most of them, were for oil to be delivered throughout the season of Volga navigation, as buying spot crude means holding it some time before it can be realized on; consequently, the season delivery price is always higher than spot oil prices.

This state of affairs undoubtedly explains the great increase and energy in drilling. There is no doubt that increased depth raises the cost of crude, but such advance in cost is insignificant in comparison with the increase in the price of crude. I stated in a previous report that the highest estimate of the cost of producing crude oil which I had heard was 4 copecks per pood, or about 17 cents per barrel, and this cost, plus the most liberal allowance for increase because of deeper drilling, certainly leaves a sufficiently wide margin for profit to induce the greatest energy in drilling; besides, there is always the chance of a big flowing well, one of which in a year will materially reduce the producer's cost of crude, and consequently greatly increase his profits. But taking the average well—*i. e.*, about 200 barrels per day—at present prices, the income is not less than \$100 per day, and at that rate it does not take many days to get the cost of the well back. Where there are never any absolute failures and the average well will pay for itself in four or five months, it is not remarkable that every man who can get money or credit is plunging into the oil-producing business.

* See CONSULAR REPORTS No. 212 (May, 1898), p. 37.

RESIDUUM, OR OIL FUEL.

The apparently sanguine views of the trade last year as to the future consumption of oil fuel—*i. e.*, that the consumption would continue to increase in 1898 and the price consequently advance—were fully confirmed by results; for, notwithstanding the increase in the demand in 1897 amounted to nearly 25 per cent, there was a further gain in 1898 of nearly 15 per cent, and the price of residuum advanced to about 60 cents a barrel just before the close of the season of Volga navigation; and, while it has been a trifle weaker at times during the period of the closed Volga season, it can hardly be said to be any lower at present, notwithstanding the Volga is not expected to be open for some weeks. Like crude, no sales of residuum for the usual season of Volga navigation have been reported for weeks, all the sales reported having been for immediate delivery, necessitating the carrying of the goods by the purchaser for from four weeks to two months; and, as the prices realized were within a shade as high as the highest price of last year, and the present quotation is about 57 to 58 cents per barrel for spot, upon that basis residuum for delivery during the navigation season would be worth about 60 to 62 cents.

As I have not been at Baku this winter, I can not speak from personal contact with many in the trade of the views generally held as to the demand for oil fuel the coming season; but I have found the few with whom I have talked to be fully as sanguine as they were a year ago that the limit of demand has not yet been reached, some even expressing the conviction that the increase in the demand this year would exceed that of last year. They did not look for a correspondingly large increase in the crude production, and were therefore very sanguine of a material advance in the price. As far as I have been able to ascertain, the basis of these very sanguine views is the fact that coal, at its present price, can not possibly compete with residuum as fuel in the manufacturing districts contiguous to the Volga, the center of which is Moscow.

As the future of petroleum fuel in Russia is of great importance in the problem of competition between Russian and American refined oils in the markets of the world (as the more the Baku refiner gets for his residuum the cheaper he can sell his refined), I thought it worth while recently to go into the matter as fully as possible, and therefore wrote Consul-General Holloway, of St. Petersburg, Consul Smith, of Moscow, and Consular Agent Martin, of Rostoff, for information about coal and am indebted to those gentlemen for much of my information.

The coal fields upon which the Moscow consumer is dependent are in the south of Russia, not far from Rostoff. The distance from

the mines to Moscow is about 1,000 miles. These fields produce both anthracite and soft coal, and the price at the mines in January was 11 copecks (5.6 cents) per pood (36.112 pounds) for anthracite and 12 copecks (6.1 cents) per pood for soft coal. The freight from the mines to Moscow on the anthracite is 10 copecks (5.1 cents) per pood, and on soft coal about 11 copecks (5.6 cents) per pood, which, adding a copeck (0.51 cent) a pood for delivery to consumers, would make the hard coal worth not less than 22 copecks (11.3 cents) and the soft 24 copecks (12.3 cents) in Moscow. These are exactly the figures quoted me by Consul Smith as the prices of the two kinds of coal in Moscow in January. Mr. Smith added that coal was only used for domestic heating purposes and by blacksmiths, as the manufacturers used petroleum fuel almost wholly.

Petroleum fuel is even less of an experiment in Russia than in the United States, as it has been used here much longer, and its value for steam raising in comparison with coal has been firmly and accurately established. It is conceded unanimously that 1 pood of oil fuel is equivalent to 2 poods of coal for steam raising; not that the 1 pood of oil will make as much steam as 2 poods of coal, but, taking into consideration the saving in expense in burning oil, the values of the two fuels are as stated. Therefore, oil fuel is certainly the preferable fuel at twice the price of coal—*i. e.*, 44 to 48 copecks (22.6 to 24.7 cents) per pood in the Moscow district.

As oil fuel is shipped to Moscow or to within 300 miles of it by water transportation, the freight is much lower than it could be by all-rail shipment. Last year, the water transportation was 8 copecks (4.1 cents) per pood, and the rail transportation 8½ copecks (4.14 cents) per pood, making a total transportation cost to the Moscow district of 16½ copecks (8.49 cents) per pood; adding to this a copeck (0.51 cent) for delivery, on the basis of the highest price at Baku last year, oil fuel could be delivered at factories in the Moscow district for 29 to 30½ copecks (14.9 cents to 18 cents) per pood. In January, Consul Smith stated that the quotation for residuum at that time was lower than it had been, but was 33 copecks (16.9 cents) per pood, which certainly gave the dealer a very fair profit.

I think this information is excellent evidence of the possibilities of an advance in the price of residuum, as it seems to point conclusively to the fact that at even as high a price as 20 copecks (10.3 cents) at Baku (over 85 cents per barrel) coal can not compete with it in the Moscow district. I also see by recent newspapers that contracts for water transportation of residuum for this season's navigation are being made at even lower rates than last year, the difference being in some cases as much as 2 copecks per pood, which, of course, is very favorable to the Baku producer.

The one important factor in the problem of the future demand for residuum for fuel, which I have been unable to ascertain, is the probable amount of consumption. I have endeavored to obtain statistics of the production of coal and its consumption in the districts which can be reached by residuum at low freight rate from official sources, but have been informed that the statistics for the year 1897 will not be published for some weeks yet; and it is useless going farther back, because there has been a great increase in manufacturing in Russia in the last few years. From private sources, which profess to be well informed, I get the information that the increase of the manufacturing industries in the Moscow district for several years has been at the rate of 25 to 30 per cent per annum, and that this ratio of increase was expected to continue for some time. Of course, all this is hardly more than conjecture; but upon such things are the hopes of the Baku trade for the future based, and only time will tell whether or not they are safe grounds. If the manufacturing industries in the Moscow district increase 25 per cent per annum, it is undoubtedly quite safe to look for a corresponding demand for residuum for fuel; but even an increase of 15 per cent in the demand for residuum over last year will necessitate nearly 30 per cent increase in the crude production to fill it, as the figures above show that the yield of the crude in residuum is only a little over 50 per cent.

I have given the views of some in the Baku trade and the basis of them. Personally, I know nothing about the probable demand for fuel oil in Russia; but it looks to me as though anything like an increase in the demand this year will not be met by a corresponding increase in the production of crude, as that would mean an average daily production for the year of more than 200,000 barrels. I do not think anyone can be found at Baku who looks for such an increase; therefore, if the demand for residuum increases, I anticipate very much higher prices for both that product and for crude.

I have only considered the residuum demand of Russia, because the demand for export is too small to play any part in prices. As will be seen by the statistics, only about 13,000,000 gallons were exported from Batum last year, the most of which was used for making cheap coarse lubricants in Europe. Italy took a little, which, I am informed, was used for fuel for the navy by the Government; but the price at Baku, plus the railway freight to Batum, which is 14 copecks (7.2 cents) per pood, prohibits its export for fuel purposes.

ILLUMINATING OIL.

From what has been said about residuum, it will be understood that throughout 1898 this product maintained first place in the consideration of the trade, and that consequently illuminating oil was

looked upon as of minor importance. Its export would have been impossible, except at considerable loss, had it not been for the reduction in the railway freight from 19 copecks to 12 copecks (9.7 cents to 6.18 cents) per pood, which went into effect in December, 1897. This was neither more nor less than a subsidy, as it has always been claimed by the railway authorities (*i. e.*, the Government, as the road is Government property) that oil could not be transported from Baku here at a profit at less than 19 copecks (9.78 cents) per pood. I have no doubt that it will seem pretty hard to the American producers that to the many other burdens they have been for years bearing is now added a subsidy of no little importance to their competitors.

At present prices of crude and residuum, the cost of a pood of refined is approximately as follows:

Description.	Cost.	
	Copecks.	Cents.
3½ poods (126 pounds) of crude at 12 copecks (6.1 cents).....	42	21.63
Plus cost of refining and chemicals.....	4	2.06
	46	23.69
Less value of 2 poods (72 pounds) of residuum at 13 copecks (6.6 cents).....	26	13.39
Cost of a pood of refined.....	20	10.3

I am unable to give the average price of refined for the year. The prices of crude and residuum were a trifle lower during the year, and the cost of refined was also a little less. At no time, however, in the first nine months of the year was the price of refined up to its actual cost, upon the basis of the prices of crude and residuum, and that its export was not entirely stopped was probably as much due to the fact that the principal exporters were also producers, and therefore their crude cost them less, as to anything else. It is possible that these exporters might have made more money by stopping export and selling their crude, but it is probable that their business was in such a condition that they could not drop export at their own pleasure.

Toward the end of the year, prices for refined oil in the foreign markets commenced to advance, and the price at Baku naturally sympathized, so that refined was quoted as high as 28 to 30 copecks (14.4 to 15.4 cents) per pood f. o. b. cars for Batum; but on receipt of the news from St. Petersburg that the railway-tariff commission then in session had decided to restore the old freight rate of 19 copecks (9.7 cents) on February 1-13, there was a very marked decline in quotations, the lowest having been 22 copecks (21.3 cents) per pood. At the latest quotation, a few days ago, the price was 24

copecks (12.3 cents) per pood for Batum shipment. It has, however, never been above 18 copecks (9.27 cents) for Caspian-Volga shipment, the difference being really a premium on tank-car capacity, as Batum shipment means with tank cars; and, owing to the limited transportation capacity of the railway, tank cars are distributed to the various refiners upon the basis of the stocks at their refineries at the 1st of each month, estimated by a committee appointed for that purpose by the railway.

Recently, the St. Petersburg railway-tariff committee changed its mind and gave notice that the advance in the rate of freight would be postponed; and, while it is asserted by some that this will be for only one month, it is my impression that it is indefinite.

At present price at Baku—*i. e.*, 24 copecks (12.3 cents) per pood, with freight to Batum and expenses here—refined costs about 38 copecks (19.57 cents) on board vessels, which is equivalent to about 4 cents a gallon. The result of any advance in the Baku-Batum freight rate is difficult to foresee. Of course, if the foreign markets will stand it, it will be added to the price here; but if they will not stand such an advance, the exporter will have to assume it or stop export. To continue export at 7 copecks (3.6 cents) per pood less at Baku will make it pretty poor business. The uncertainty of the freight rate, however, is very nearly as bad as an advance, for it must be exceedingly hazardous for exporters to do business more than a month in advance, which is a hand-to-mouth way in which to carry on so important a business as this.

With the unfavorable conditions for refining which have existed for some time, it is not at all strange that comparatively few refineries were working last year. Three years ago, there were at Baku about 120 refineries; but statistics show that only 63 worked in 1897, and of that number 20 produced over 90 per cent of the total output. I have not yet received statistics of the refining industry for 1898; but from the fact that the Baku newspaper stated in September that only 8 refineries were working, I conclude that the number working throughout the year was even less than in 1897.

The output of refined from Baku in 1898 was about 473,000,000 gallons; but as the stocks were reduced about 15,000,000 gallons, the amount manufactured was about 458,000,000 gallons, which was not 4,000,000 gallons more than in 1897, notwithstanding the fact that the crude production last year was nearly 8,000,000 barrels more than in the preceding year.

The outlook for this year is no better than it was for last year; and, unless there should be a very marked advance in the price of refined in the foreign markets, even with an important increase in crude production, there is little hope of profitable export. Even

with an advance abroad, the export can not materially increase without an increase in the transportation capacity of the Baku-Batum Railway; for, although this railway can carry more than it did last year, it can not carry enough more to make any great difference in the export. Under such circumstances, the production of crude oil plays no very important rôle in the problem of competition in refined oil.

BAKU-BATUM PIPE LINE.

In my report for 1897,* I mentioned this project, stating that the first 145 miles of it—from Batum to Michailovo—were under construction, but that there had been considerable difficulty in getting pipe; that the Tiflis paper, however, had stated that the work of construction was progressing favorably; and that the line would be carrying oil by the end of the summer. That was just one year ago, and now, a year later, a personal inspection of the work has convinced me that it will not be carrying oil by the end of this summer. I was informed a short time ago that the gentleman in charge of the construction of the line had said that he did not expect to complete the work before October.

It will naturally seem to the American familiar with pipe-line construction that three years is a rather long time for the construction of 145 miles of 8-inch pipe along the line of a railway, where distribution of pipe is extremely easy; but their judgment is based upon a knowledge of how such work is done in the United States. No one here would express surprise that the work has not been done more rapidly.

It seems that the delay in this undertaking is entirely due to the difficulty in getting pipe. About three years ago, an American-Russian company was organized for the manufacture in Russia of iron of every description from the ore which the company was to mine. This company secured the contract for the pipe for this pipe line, or at least 125 miles of it, which was to be delivered before December 31, 1897; and, in order to fulfill this contract, they secured a pipe mill from an American manufacturer and sufficient skilled workmen to run it. This mill was established in the south of Russia, and two years ago this month it commenced making pipe; but so much of it was rejected by the inspectors that I believe even now they have about 50 miles yet to deliver. I think the work of constructing the line is not pushed because of the uncertainty of the delivery of the pipe. The line might easily be completed in two or three months if the pipe were on hand. It looks as if the Russian-American company would not make much out of its pipe contract;

* See CONSULAR REPORTS No. 212 (May, 1898), p. 37.

but if, as is said, it gets \$2 per foot, it must have a pretty fair margin to work on.

The object in constructing this pipe line is to add to the transportation capacity of the railway, as the refined (the line is for this class of oil only) will be brought by rail to Michailovo, a distance of about 415 miles from Baku, and from there piped to Batum. As before mentioned, the line is 8 inch and the pumps are of the most approved American pattern, made in the United States under the inspection of a Russian engineer especially for this line. One set of the pumps—*i. e.*, for one pumping station—has already been delivered and the others are en route, so that there is no detention on this account. The first pumping station will be at Michailovo, by which the refined will be forced, over an elevation of 500 to 600 feet, a distance of 77 miles to the station of Samtredi, a fall of probably 2,000 feet from the summit. From Samtredi there is not much of a fall to Batum. It is gradual, and there are no elevations to overcome; but about halfway between Samtredi and Batum there will be still another station. How much this line will increase the transportation capacity of the railway seems to be an open question here. It may, however, reduce the cost.

BATUM EXPORT.

There was a small increase in the export of all products from Batum last year, but the increase in illuminating oils was only about 10,000,000 gallons; so that this trade can not be held accountable for any falling off in the American export, and until the completion of the pipe line for refined from Michailovo to Batum (which will hardly be in time to play much of a part in the business of this year) there can be no material increase in the Russian export, owing, as stated before, to the limited capacity of the railway.

For the reasons before mentioned, it will be understood that there was no great energy shown by the export trade for the greater part of the past year; but the capacity of the trade was tried the last month of the year and up to the end of January this year, and case-oil loading particularly was carried on slowly. Owing to the very bad weather, which prohibited such loading in January, the exporters escaped with little demurrage. There was no lack of oil here; but, like most good things in this world, it was not equally distributed, and the principal holders seemed to have no desire to ship, while those who had shipping engagements either oversold or overestimated the capacity of the railway. Since January, however, the output has been remarkably light, due partly no doubt to the uncertainty of the freight rate.

About four weeks ago, the trade here received a pretty severe

shaking up by a peremptory notice from the military commandant annulling all permits for new tankage and prohibiting the completion of tankage then under construction. This was modified, a few weeks later, to permit the completion of tankage actually in course of construction.

A few days after the promulgation of the order mentioned, the newspaper hinted that a commission might be expected this month to decide whether or not all the tankage here, except that sufficient for a day's supply for each of the case factories, must be removed several miles, out of range of the fortifications. As, owing to the strict press censorship in Russia, the utterances of the most insignificant newspaper carry considerable weight, this caused not a little uneasiness on the part of the trade, as the removal of nearly 1,000,000 barrels of tankage is no trifling matter. Within a few days, the scare was revived by the statement of the newspaper that military photographers were at work on photographs and plans of the tankage for the use of the commission which is supposed to be en route. While I hardly think anyone here expects that the tankage will be ordered moved, there is a chance of it.

The reason assigned by the public generally for the contemplated removal of the tankage is that, in case of a fleet attacking Batum, the tanks would immediately take fire; and, as they are between most of the forts and the sea and would likely burn for days, they would obstruct the view of the sea, and thus give an attacking fleet a great advantage; for, while the vessels might move, the forts are stationary. It was proposed by some of the exporters to petition the Government against the removal of the tankage, giving assurance that they would themselves set fire to their tanks upon two days' notice from the authorities; which idea has, I think, been abandoned, as it probably occurred to some of the interested parties that the proposed notice from the Government would not be necessary.

Between the uncertainty of the freight rate and the stability of the Batum tankage, which is absolutely necessary for the carrying on of the trade, you may imagine that the Batum exporter is not getting much enjoyment out of life; but if he is not making money, he is having excitement.

FOREIGN CAPITAL.

Last year, I mentioned that much foreign capital had come into the Baku oil trade. Since then, more has come in, and I think that the British investment at Baku alone in the last two years was not less than \$10,000,000, and there are prospects of still more money coming. The first investment, although seeming wild at the time it was made, was remarkably successful. This was the purchase of producing property for about \$2,500,000 and putting it on the Brit-

ish market in the shape of a stock company with a capital of about \$6,000,000. Notwithstanding this great inflation, the company paid, I think, 33 per cent and put away a handsome surplus for its first year's business; in fact, the property actually paid the purchase money back in one year. I must add, however, that to this company belonged the three wells at Bibi-Eibat which produced over 6,000,000 barrels last year, and one of which produced largely the last two months of the preceding year.

Naturally, the success of this company boomed Baku producing property in Great Britain, and now the price for that sort of property is literally "out of sight." And yet, if it is correct, as I am informed, that there is plenty of British capital waiting for investment at Baku on the basis of ten to fifteen years' purchase—*i. e.*, the price to be ten to fifteen times the average income of the property for the last three years—I see no reason why the whole Baku business can not be had, as it would be quite a fine thing for sellers. The basis for buying oil production is quite new, and it is difficult to believe that there are men with money ready to buy oil production in the hope of getting their money back in ten to fifteen years.

The advent of so much foreign capital seems to have worried the Russian press very much, and has brought down the usual wrath against the unfortunate foreigner. The wail that foreigners are getting the wealth of the land has gone up from all sides, and to it has recently been added the warning that the British purchasers may only be stool pigeons for the great and powerful American competitor of Russian oil, which will, if not soon checked in its victorious career, control the whole trade and compel the poor Russian peasants to pay outrageous prices for their illuminant or go to bed in the dark. Of course, this sounds very funny, but I am sure that the Russian newspapers are serious and really believe what they say.

GROSNI.

The Grosni field has exhibited no redeeming features in the past year, as, notwithstanding considerable drilling, there has been not only no increase, but actually a decrease in the production, as will be seen from the following statistics for 1897 and the first ten months of 1898:

Company.	1897.	1898 (10 months).
	<i>Barrels.</i>	<i>Barrels.</i>
Akhverdoff Company.....	1,980,000	1,178,269
Maximoff Company.....	420,000	216,484
Moscow Company.....	276,000	162,166
Dnieper Company.....	78,000	116,061
Total	2,754,000	1,672,980

The barrels hold 42 gallons. Of the nine firms drilling in this field, the above four were the only ones which had any production. The figures show a falling off of about 2,000 barrels per day, notwithstanding the fact that there were 18 wells producing on October 31, against only 12 at the beginning of the year. The following is a comparison of the work in the field at the close of 1897 and 1898:

Description.	December 31—	
	1897.	1898.
	Number.	Number.
Wells producing.....	12	26
Wells idle.....	7	13
Wells drilling.....	24	24
Wells drilling deeper.....	3	1
New derricks.....	6	10

Big wells have been reported from Grosni several times during the year, but they were either overestimated or very short lived, for the production shows no signs of them.

The outlook is certainly not more promising than it was last year, for some wells have been drilled to more than 2,000 feet without a sign of oil, and many other wells which are drilling are much deeper than those which produced most of the oil in the past.

The production was sold chiefly for fuel, as it gives much less illuminant than Baku oil and deteriorates more rapidly from exposure in open reservoirs, requiring not more than a few weeks of such exposure to destroy it for illuminating purposes and to make it quite as heavy as the Baku standard for residuum. There are two modern refineries at Grosni; but, as less than 1,500,000 gallons of refined oil have been shipped from there during the year, it seems that they did not work much of the time. The refined mentioned was received at Novorossisk and from there exported to England early in this year. The only export from Novorossisk in 1898 was a small lot of refined, which had been in tank there for so long that it was only fit for distillate and, I hear, was given away in order to clear the tanks. It amounted to about 52,000 gallons and went to Fiume.

There is a small refinery at Novorossisk, belonging to people who have some wells in the vicinity which produce a very heavy oil. They also receive Grosni crude, which they run wholly for residuum. The small amount of refined which they produce is sold locally and at the small seaports in the vicinity, while the residuum goes principally to Odessa for fuel.

JAMES C. CHAMBERS,

BATUM, *February 23, 1899.*

Consul.

Number of wells producing.

Month.	Balakhani-Sabunchi.		Romani.		Bibi-Eibat.		Total.	
	1897.	1898.	1897.	1898.	1897.	1898.	1897.	1898.
January.....	502	619	72	82	25	31	599	732
February.....	500	639	73	82	25	26	598	747
March.....	516	659	73	76	25	33	614	768
April.....	527	644	75	79	24	32	626	755
May.....	540	642	78	84	25	38	643	764
June.....	554	670	81	81	23	40	658	791
July.....	561	683	78	86	29	40	668	809
August.....	567	690	83	83	27	33	677	806
September.....	589	706	79	84	20	38	688	828
October.....	601	736	82	86	30	41	713	863
November.....	591	740	78	90	28	39	637	869
December.....	599	770	77	93	26	42	702	905
Average for the year.....							657	803

Number of flowing wells.

Month.	Balakhani-Sabunchi.		Romani.		Bibi-Eibat.		Total.	
	1897.	1898.	1897.	1898.	1897.	1898.	1897.	1898.
January.....	2	2	5	4	2	3	9	9
February.....	4	1	5	6	4	4	13	11
March.....	2	3	5	4	4	4	11	11
April.....	1	4	5	3	1	1	7	10
May.....	3	1	2	5	3	4	8	10
June.....	2	4	1	5	4	5	7	14
July.....	2	5		5	4	5	6	15
August.....	3	6	1	5	2	4	6	15
September.....	2	6	4	6	2	3	8	15
October.....	1	5	3	5	4	3	8	13
November.....	3	3	3	7	3	4	9	14
December.....	1	9	1	4	3	1	5	14
Average for the year.....							8	13

Number of wells started drilling.

Month.	Balakhani-Sabunchi.		Romani.		Bibi-Eibat.		Total.	
	1897.	1898.	1897.	1898.	1897.	1898.	1897.	1898.
January.....	18	23	5	5	1		24	28
February.....	7	27		3	1		8	30
March.....	19	30	3	2		2	22	34
April.....	13	21	6	3			19	24
May.....	22	25	3	3		1	31	29
June.....	34	34		2			34	36
July.....	27	35		1	2		29	36
August.....	37	30	1	5			38	35
September.....	28	32	2	2			30	34
October.....	25	48	1	3		3	26	54
November.....	17	71	3	2	1	2	31	75
December.....	19	34	2	7			21	41
Total.....	272	410	26	38	5	8	303	456

Wells completed, with depth and average daily production.

Month.	Balakhani-Sabunchi.					
	1897.			1898.		
	Wells.	Average depth.	Average daily product.	Wells.	Average depth.	Average daily product.
		<i>Feet.</i>	<i>Barrels.</i>		<i>Feet.</i>	<i>Barrels.</i>
January	11	825	2,401	22	725	270
February.....	9	806	226	14	752	207
March.....	11	1,115	372	16	918	602
April.....	15	936	401	24	837	248
May.....	23	747	411	5	890	623
June.....	19	747	238	15	819	319
July.....	17	784	338	20	873	568
August.....	14	865	310	18	933	203
September.....	10	830	306	24	801	255
October.....	15	825	251	21	917	226
November.....	15	780	276	23	902	436
December.....	16	657	273	20	880	259
Year.....	175	815	451	222	845	331

Month.	Romani.					
	1897.			1898.		
	Wells.	Average depth.	Average daily product.	Wells.	Average depth.	Average daily product.
		<i>Feet.</i>	<i>Barrels.</i>		<i>Feet.</i>	<i>Barrels.</i>
January	2	1,134	265	6	1,453	160
February.....				1	1,440	3,600
March.....				1	1,638	73
April.....	3	266	2,759	2	1,153	281
May.....	1	1,372	360	1	1,292	5,040
June.....	4	1,204	420	1	1,652	254
July.....				2	1,425	260
August.....	5	1,431	480	1	1,624	2,447
September.....	2	1,617	598	1	1,295	4,000
October.....	4	905	440	2	1,306	464
November.....	1	1,316	304	1	1,540	213
December.....				2	1,673	163
Year.....	22	1,118	750	21	1,448	902

Wells completed, with depth and average daily production—Continued.

Month.	Bibi-Eibat.					
	1897.			1898.		
	Wells.	Average depth.	Average daily product.	Wells.	Average depth.	Average daily product.
		<i>Feet.</i>	<i>Barrels.</i>		<i>Feet.</i>	<i>Barrels.</i>
January	1	1,463	1,192	2	1,596	29,094
February	2	1,335	460	1	1,495	2,062
March				1	1,495	2,896
April				3	1,484	1,001
May	1	1,456	1,284			
June	2	1,442	32,797	2	1,673	339
July	1	1,095	1,666	2	1,517	979
August	1	1,512	600			
September				1	1,750	240
October	3	1,617	1,347	1	1,827	100
November				1	1,554	6,880
December	1	964	264	1	1,694	273
Year	12	1,420	6,282	15	1,595	5,075

Month.	Total.					
	1897.			1898.		
	Wells.	Average depth.	Average daily product.	Wells.	Average depth.	Average daily product.
		<i>Feet.</i>	<i>Barrels.</i>		<i>Feet.</i>	<i>Barrels.</i>
January	14	912	380	30	931	2,522
February	11	898	278	16	861	460
March	11	1,115	372	18	988	781
April	18	816	787	29	925	329
May	25	798	436	6	958	902
June	25	875	1,839	18	960	304
July	18	800	395	24	972	579
August	20	1,025	380	19	970	321
September	12	962	367	26	857	420
October	22	955	375	24	987	248
November	16	814	276	25	954	538
December	17	675	273	23	985	249
Year	209	880	813	258	937	653

Average daily production of Baku fields in 1897 and 1898.

Month.	Flowing wells.		Pumping wells.		Total.	
	1897.	1898.	1897.	1898.	1897.	1898.
	<i>Barrels.*</i>	<i>Barrels.*</i>	<i>Barrels.*</i>	<i>Barrels.*</i>	<i>Barrels.*</i>	<i>Barrels.*</i>
January.....	46,070	59,365	102,350	113,156	148,420	172,521
February.....	60,621	103,963	97,682	113,729	158,303	217,692
March.....	25,793	23,861	102,324	118,589	128,117	142,450
April.....	28,985	33,492	109,556	117,576	138,541	151,069
May.....	21,670	24,129	108,504	123,670	130,174	147,797
June.....	31,535	16,020	110,714	126,297	142,249	142,317
6 months.....	35,428	42,680	105,254	118,882	140,682	161,562
July.....	20,020	30,015	110,016	122,197	130,036	152,212
August.....	10,509	22,933	113,145	119,624	123,654	142,557
September.....	18,500	29,704	114,858	125,737	133,358	155,501
October.....	12,929	40,212	121,873	130,063	134,802	170,275
November.....	52,700	27,960	118,680	129,378	171,389	157,338
December.....	21,472	37,797	109,054	128,398	130,526	168,195
Year.....	28,935	37,302	109,956	122,413	138,891	159,615

* Of 42 gallons.

Output of all products from Baku in 1898.

Month.	Illuminating.	Lubricating.	Residuum.	Crude.	Total.
	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
January.....	25,825,000	3,120,000	5,635,000	4,810,000	39,390,000
February.....	28,095,000	2,565,000	9,820,000	7,550,000	48,030,000
March.....	35,235,000	5,455,000	46,165,000	21,355,000	108,210,000
April.....	46,250,000	3,555,000	135,050,000	20,645,000	205,500,000
May.....	44,890,000	6,280,000	174,420,000	49,565,000	275,155,000
June.....	44,665,000	5,505,000	162,450,000	48,100,000	260,720,000
July.....	50,995,000	4,625,000	221,025,000	7,010,000	283,655,000
August.....	47,740,000	5,800,000	192,100,000	20,555,000	266,195,000
September.....	43,225,000	4,765,000	166,355,000	19,885,000	234,230,000
October.....	41,075,000	4,255,000	83,465,000	9,880,000	138,675,000
November.....	33,995,000	3,140,000	7,165,000	4,360,000	48,660,000
December.....	31,215,000	3,040,000	8,155,000	5,745,000	48,155,000
Total.....	473,205,000	52,105,000	1,211,805,000	219,460,000	1,956,575,000
1897.....	458,035,000	45,860,000	1,127,100,000	130,045,000	1,761,040,000

Stocks of all products at Baku December 31, 1897 and 1898.

Product.	1897.	1898.
Crude:	<i>Barrels.</i>	<i>Barrels.</i>
At wells.....	592,547	859,584
At refineries.....	1,840,212	1,462,344
Total crude.....	2,432,759	2,321,928
Illuminating.....	<i>Gallons.</i>	<i>Gallons.</i>
Lubricating.....	67,274,980	51,805,615
Residuum.....	9,610,725	11,605,275
	263,532,270	265,121,885

Shipments of petroleum products from Batum, Russia, for the years 1897 and 1898.

To—	Crude and residuum.		Lubricating oil.		Illuminating distillate.		Refined oil.		Total	
	1898.	1897.	1898.	1897.	1898.	1897.	1898.	1897.	1898.	1897.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Austria-Hungary.....	176,890	205,190	2,985,615	2,890,120	11,176,665	12,381,270	4,705,470	2,826,530	19,044,600	18,263,110
Africa.....	.....	.....	.....	.....	.....	.....	1,217,200	1,140,360	1,217,200	1,140,360
Belgium.....	3,723,720	3,546,595	8,047,315	8,086,275	159,490	233,185	8,106,380	1,870,690	20,036,905	13,745,745
Bulgaria.....	27,450	700	46,150	58,850	.....	.....	2,270,040	6,030,730	2,343,640	6,099,280
China and Cochin China.....	.....	.....	.....	.....	.....	.....	9,834,880	19,406,270	9,834,880	19,406,270
Egypt.....	20,450	6,750	114,550	140,600	.....	.....	13,153,390	11,001,690	13,288,390	11,140,040
France.....	2,373,630	1,637,395	9,338,175	6,699,545	14,864,665	12,855,135	1,639,175	856,270	28,216,245	22,048,345
Germany.....	2,020,955	1,236,865	10,601,800	8,518,810	78,305	97,000	7,010,465	7,257,905	20,611,595	17,110,580
Great Britain.....	2,614,475	2,116,810	5,830,140	4,725,945	4,321,665	13,646,660	41,572,465	23,485,345	54,358,745	43,074,760
Greece.....	89,050	1,000	100,000	1,000	.....	.....	39,148,950	34,984,880	39,678,000	34,985,880
India.....	1,056,340	1,843,840	316,750	559,800	.....	.....	7,567,680	5,862,220	8,940,780	8,265,860
Japan.....	.....	.....	.....	.....	.....	.....	2,718,800	6,142,140	2,718,800	6,142,140
Java.....	.....	.....	.....	.....	.....	.....	5,198,840	1,364,250	5,198,840	1,364,250
Malta.....	.....	.....	.....	.....	.....	.....	1,475,835	1,674,415	1,475,835	1,674,415
Netherlands.....	.....	.....	5,000	100,000	.....	.....	2,071,805	.....	2,071,805	100,000
Philippine Islands.....	.....	.....	.....	.....	1,668,480	.....	.....	1,668,480	1,668,480	1,666,000
Roumania.....	1,000	4,100	122,550	233,500	.....	.....	423,200	515,470	566,750	753,070
Spain.....	401,850	320,655	246,845	759,445	.....	.....	.....	738,695	738,695	1,080,100
Suez Canal.....	20,500	.....	70,400	130,700	.....	.....	55,730,190	56,402,320	55,760,690	56,402,320
Turkey.....	72,850	73,450	10,400	.....	.....	.....	28,730,005	33,336,315	28,882,255	33,540,475
Other countries.....	1,000	.....	15,250	4,500	.....	.....	685,100	511,170	701,350	515,670
Total exports.....	12,710,120	10,992,350	37,870,540	32,806,090	30,600,790	30,213,250	236,168,750	217,210,080	317,359,200	300,285,670
Russia.....	754,745	255,470	1,965,200	1,143,555	72,450	33,700	27,596,940	31,438,865	30,389,335	32,871,590
Total shipments.....	13,464,865	11,247,820	39,844,740	34,012,645	30,673,240	39,246,950	263,765,690	248,649,945	347,748,535	333,157,260

NOTE.—Suez Canal shipments were in bulk to points unknown here. The illuminating distillate to Great Britain was gas oil.

EXPORTS OF SIBERIA.

Since the Siberian Railway has brought the eastern sections of Russia into the area of universal trade, the question of the future importance of Siberia as a competitor in the international market as regards natural products, and as a country having more or less openings for the disposal of manufactured goods, is becoming of great interest to all European countries. The resources of Siberia are, at the present moment, undergoing careful investigation on the part of both Russian and foreign capitalists.

Siberian newspapers publish daily the formation of new companies and commercial undertakings through banks and agencies for the benefit of firms in foreign countries which desire to gain the Siberian market, and likewise a part of the Chinese trade.

The railway has also opened up a new market for each province in European Russia. It is reported that in Poland several factories have been opened exclusively for the manufacture of goods suitable for the Siberian markets. The Ural iron merchants, owing to the keen competition of the manufacturers of southern Russia, are now directing their energies toward Siberia.

The agricultural interests of Russia, long before the opening of the Siberian Railway, foresaw serious competition in grain, and therefore succeeded in raising the tariff of transportation on the Siberian product.

It must be mentioned that the first year's working of the railway did not realize expectations, as the cargoes were so heavy that much grain had to wait for transportation beyond the Urals. The Samara-Zlataosk Railway also, not being prepared for an increased traffic, was incapable of satisfying the demands.

Siberia entered the world's trade under very favorable conditions; with bad harvests in Europe and rising prices, Siberia was able to place on the market enormous quantities of corn. Western Siberia, during the first half of 1897, sent nearly 58,000 tons, and during the second half, 174,000 tons; but, owing to deficiency in rolling stock, 80,000 tons of grain remained beyond the Urals.

During the first half of 1898, about 170,000 tons were sold at good prices and hurried abroad by the Baltic and Black sea ports, while some was sold in Poland and Moscow.

Grain from Siberia can be transported to Russia by two routes, either by water through Tumaine or by rail through Cheliabinsk. The former route has by no means lost its importance; on the contrary, transports have increased.

Cheliabinsk alone sent nearly 100,000 tons of grain, not including that which passed through it; therefore, to have an accurate idea of the Siberian export for the first year of the railway, it is necessary to take into consideration three categories of transport—*i. e.*, exports from Cheliabinsk, by the stations of western Siberia, and by water through Tumaine, the transmitting point for cargoes coming by the rivers Ob and Irtysh.

Not reckoning caravan transports from the government of Tobolsk, the export of cereals from Siberia in 1897, according to Siberian Life, was about 400,000 tons. Of this quantity, nearly 91 per cent was wheat and flour, 5 per cent oats, and a little more than 3 per cent other grains. The exports in 1897 were distributed as follows:

	Tons.
• Baltic Sea ports.....	229,225
Black Sea ports.....	9,338
Western frontier.....	39,048
Rivers Volga and Beloy.....	5,500
Internal Russian markets.....	6,225
Ural works.....	4,709

From the above, it will be seen that 94 per cent of Siberian wheat was sent abroad, and if the wheat sent down the rivers to wharves in Samara, Oufa, and Perm, also intended for export, is included, the quantity will be more than 95 per cent. The largest quantity was exported through Reval—namely, 145,161 tons, or over 48 per cent of the whole export. After Reval comes St. Petersburg, Libau, and Riga, and lastly the southern ports, Novorossisk, and Rostoff.

The large quantity consumed by the Ural district is noticeable. The railway has opened communication with central and western cities in Siberia, which naturally, up to the present, have experienced all the disadvantages of high prices. About 16,000 tons of grain were transported to central towns, such as Tomsk, Archinsk, Krasnojarsk, and Irkutsk. The railway, therefore, while affording an outlet for Siberian grain, has at the same time connected the manufacturing districts of the Ural with eastern Siberia.

THOMAS SMITH,

MOSCOW, *February 22, 1899.*

Consul.

AGRICULTURAL PRODUCTS OF SIBERIA.

In my report of February 22, 1899,* I gave an analysis of the grain export from Siberia during the first year of the opening of the Western Siberian Railway. I now wish to refer to other items of export.

The freights usually carried on the railway are grain, oil seeds,

* See preceding report.

flax, wax, honey, eggs, meat, tallow, furs, wool, bristles, butter, sheepskins, hides; also tea and cedar nuts. For the first year of working (1897), from the eastern stations of the Ural, Ekaterinburg to Tumaine, the whole transport by the Siberian Railway consisted of—

Articles.	Quantity.	Articles.	Quantity.
	<i>Tons.</i>		<i>Tons.</i>
Agricultural products.....	419,982	Fish.....	5,313
Cattle.....	157,088	Timber.....	13,981
Tea.....	21,244	Miscellaneous goods.....	16,167
Cedar nuts.....	4,584		

It is thought that the exports of cattle were of more value than those of agricultural produce. Exact figures can not be given, as the railway confines its statistics to weights.

Cheliabinsk, Petropavlosk, Kourgan, Ousk, and Cainsk are the most important stations on the Siberian Railway for the shipment of animal produce. The railway has assisted the trade of the fairs which take place in the far steppes, the principal being held at Constantine, Tainchicoolsky, Petroffsky, and Conandinsky. Many exports reach the Russian markets through the Nizhni fair, which is an important outlet for sheepskins, furs, etc.

In 1897, before the Central Siberian Railway had been opened, there was not a large export of raw material to the east. As soon as communication was established, Siberia started sending meat and produce in large quantities to Tomsk, Krasnojarsk, Irkutsk, and other cities. The new leather works in the government of Tomsk will, without doubt, tan most of the skins from western Siberian steppes. Oil refining in western Siberia is making fast progress, and large quantities are sold abroad.

In 1897, more than 2,500 tons of Siberian butter were sent abroad through St. Petersburg, Taganrog, and Sebastopol. Seven large offices have been opened for the purchase of butter for export, and the farm of the Danish consul sends butter weekly to Denmark. In 1897, dairy machinery to the value of \$50,000 was sent to Siberia, and 30,500 tons, or \$60,000 worth, of fresh butter was manufactured during the first half of 1898.

THOMAS SMITH,
Consul.

Moscow, *February 28, 1899.*

THE RUSSIAN COTTON MARKET.

American cotton has a very keen competitor in the Russian market in Asiatic cotton grown from imported American seeds. This latter cotton is equal in quality to middling New Orleans cotton. It is reported that this Asiatic cotton deteriorates after a lapse of years, and that fresh seeds have to be planted. The prices are about the same; lately, however, American produce has had an advantage, owing to a fall in the price which Asiatic cotton has not been able to follow on account of the cost of production and transportation. A large cotton firm having extensive interests in Asia, in consequence of the fall in price, has liquidated its affairs there.

In addition to the above cotton, there are some varieties of native Asiatic cotton of inferior quality, at corresponding prices.

The offers made daily by Russian traders in English currency are generally only an inducement, as most of the buying is done in Russian rubles per pood (36 pounds) and only in exceptional cases in pence. Agents, however, offer and sell in pence, because English, American, and French exporters will not sell in Russian money. On the whole, Russian consumers prefer dealing in their own currency, as they are unaccustomed to foreign business methods. Direct business with the United States is very limited, the larger part being carried on through England. This is partly due to the fact that Russian order books are often well filled for months and sometimes a year ahead, and to counterbalance this, they have to cover themselves with c. i. f. contracts for the quantities required from Liverpool, as American exporters usually decline to sell crops before they are planted.

Direct American business, for prompt delivery, is done with Philadelphia, New York, and Savannah. Small quantities also come from New Orleans. Russian spinners buy only the better sorts of American cotton, as to buy lower qualities would entail loss, owing to the high duty of 3.15 rubles (\$1.57) per 36 pounds. It would be as well for American exporters to bear in mind, when dealing with Russians, that the cotton they offer must be up to the standard (Liverpool classification) or even better.

Shipments from a Philadelphia firm of good reputation are higher in price than others, for the reason that its goods are renowned for quality.

At the present moment, there is a scarcity of cotton in the Moscow market.

The average price paid for American cotton in Moscow during the months of May to October was 8.87 rubles (\$4.43) per 36 pounds.

The largest Moscow firms in the cotton trade are the following: L. Knoop, Wogan & Co., Otto Wogan, H. W. Colley, Persia and Central Asia Trading Company, Kraft Bros., Spies Stucken & Co., and A. Berg.

Agents: J. J. Blismer, C. Meierkort, A. Ruperti, Gust Loewenthal, W. Suckan, A. Petzer, R. Walch, and John Grünberg.

THOMAS SMITH,

Moscow, *March 3, 1899.*

Consul.

RUSSIAN ICE STEAMER.

Consul-General Holloway, of St. Petersburg, sends, under date of March 28, 1899, translation of an article from the *Novoe Vremia* of the 17th instant, referring to the first trip of the new 10,000-ton ice boat recently built in England* for the purpose of keeping the ports of St. Petersburg and Riga open during the winter months, as follows:

The ice boat *Erma*k arrived at Cronstadt March 5-17. This boat was made after plans prepared by Admiral Makaroff and built in England. Owing to the fogs, it had to remain two days in Belt. Near Reval it met with very thick ice, but still continued moving at 7 knots per hour. Near Seskari it met with large fields of ice, from 9 to 10 feet high above the water line. Here the *Erma*k could not move on; but, with the aid of its machinery, it acquired a swinging motion, and the water running out of a special apparatus in the boat melted the ice under the vessel, which moved on, dispersing the ice mountains. The ice boat presses on the ice with its prow, the screw that is under it lets out water which softens the ice, and the movement of the screw makes the ice go under it and breaks it into rather small pieces. This ice boat has no keel and should therefore be subject to great rolling; but, in order to avoid this, there is a receptacle in the hull of the vessel, filled with water, which is arranged in such a way that the water does not allow the vessel to sway too much one side or the other, and keeps it in equilibrium.

The boat was met at Cronstadt with great triumph and music. Hundreds of people went out to meet it, running alongside of it on the ice.

The ice boat belongs as yet to the Ministry of Finance. It is at the same time a passenger boat, a freight boat, and a tug boat. It can accommodate nineteen first-class passengers, for which it has a fine cabin, decorated with imperial portraits, with double windows, double illuminators, and a special ventilator, which lets warm air into the cabin. The walls are of oak. The boat is lighted by electricity.

On March 31, the consul-general adds:

The new ice boat *Erma*k left Cronstadt on the 25th of March and opened the port of Reval, plowing through from 16 to 18 feet of ice, releasing three commercial steamers that were frozen fast some dis-

* See CONSULAR REPORTS No. 220 (January, 1899), p. 108.

tance from the shore. On the morning of March 27, the *Ermak* left Reval, clearing the way to the sea for four vessels. During the first four days of the *Ermak's* arrival at Russian ports, she released sixteen vessels from the ice and opened the way for them to proceed to sea.

QUOTATIONS FOR RUSSIAN WHEAT.

On January 14 last, after considerable time spent in investigating the wheat question here, I prepared and sent to the Department a report* showing that there is a chance for American wheat to supplant the Russian at Malta. I hoped to be able to furnish statistics showing the prices paid for "Taganrog" wheat for the year 1898; but it being important that the report be furnished as soon as possible, I was obliged to omit them. I am now able to give the following figures, showing the prices paid for good Taganrog (Russian) wheat, weighing not less than 496 pounds per salm, or quarter, in Malta and London:

Month.	Malta market rate, exclusive of duty.	Highest London quotations.
June.....	\$10.21 to \$12.16	\$8.02 to \$8.26
July.....	9.97 to 10.21	7.53 to 7.77
August.....	9.48 to 10.33	7.29 to 7.53
September.....	9.23 to 9.59	6.80 to 7.04
October.....	9.23 to 10.45	6.56 to 6.80
November.....	9.97 to 11.43	7.53 to 7.77
December.....	10.21 to 10.70	7.29 to 7.53

Quotations covering the first five months of the year are not given, for the reason that but a very small quantity was imported during those months, and also because no quotations are obtainable. The local government statistics for the year will probably not be made up before the middle of the coming summer, and what has above been given is in advance of any Government compilation.

JOHN H. GROUT, Jr.,

MALTA, January 31, 1899.

Consul.

*See CONSULAR REPORTS No. 224 (May, 1899), p. 100.

RUBBER OVERSHOES IN AUSTRIA.

There is a good field in Austria for the sale of American overshoes of rubber. Russia has controlled the market in this line here for a long time, but the Russian goods have lately shown a falling off in quality. Some 400 tons are annually shipped by Russian manufacturers into this country.

The only way to make large sales is to proceed as the Russians do; that is, have headquarters in Vienna with a good stock of goods, and send out traveling agents speaking the languages of the country—at any rate, German—fluently, until the superiority of the American overshoe can be demonstrated. As this variety of foot wear is just coming into use here generally, there is an excellent opportunity of working up undeveloped territory, as well as of showing that the American article is better in material, shape, and finish and will outlast, under like circumstances, the overshoe made in other countries.

The retail prices in Vienna are:

Description.	Jersey lining.	Wool lining.
<i>Arctics.</i>		
Men's	\$2.21	\$2.47
Women's.....	2.07	2.27
Girls'.....		1.70
Children's.....		1.36
<i>Rubbers with high backs and fronts, known as storm rubbers.</i>		
Men's	1.34	.....
Women's	1.00	.....
<i>Rubbers with backs and fronts lower than the preceding.</i>		
Men's, self-acting.....	1.48	1.68
Boys', self-acting.....	1.20	1.42
Children's, self-acting.....	.65	.81
<i>Rubbers, ordinary, low, leaving all of the shoe uppers uncovered.</i>		
Men's	1.30	1.60
Women's.....	.83	1.05
Girls'.....	.60	.87
Children's.....	.59	.75
<i>Rubbers a trifle higher than the preceding.</i>		
Men's, self-acting	1.75	1.90
Women's, self-acting.....	1.24	1.46
Boys', self-acting.....	1.38	1.66
Girls', self-acting.....		1.28
Children's, self-acting.....		1.03

The wholesale prices range from 33 to 50 per cent less than the foregoing.

The imports for 1897 into Austria-Hungary of overshoes in which rubber was used are tabulated as follows:

Country of origin.	Quantity.	Value.
	<i>Pounds.</i>	
United States.....	5,280	\$3,024
Belgium	1,980	1.134
France.....	660	378
German Empire.....	22,880	13,104
Great Britain.....	13,860	7,938
Russia	380,380	217,854
Sweden	880	504
Switzerland.....	440	252
Total	426,360	244,188
Total for 1896.....	686,180	374,280
Total for 1895.....	595,460	329,160
Total for 1894.....	250,800	136,800
Total for 1893.....	276,980	163,350

The Austro-Hungarian duty on this class of merchandise is 30 florins gold per 100 kilograms, or \$12.18 per 220 pounds.

CARL BAILEY HURST,

VIENNA, *March 28, 1899.*

Consul-General.

AMERICAN BOOTS AND SHOES IN DENMARK.

I consider the present moment most opportune for the introduction into Denmark of American boots and shoes, as the tendency to use ready-made shoes is increasing rapidly, since the difference in price with those made to order is becoming marked.

The bootmakers in Copenhagen are going out on strike on the 1st of April next, as their masters will not grant the enormous increase in wages demanded.

The import of foreign-made shoes increases steadily, as will be seen from the following figures:

	<i>Pounds.</i>
1889	194,502
1891.....	208,663
1893.....	311,866
1895.....	364,445
1897.....	379,452

Austria, Italy, Germany, and, to a small extent, Great Britain control this market; but there is no reason why our manufacturers should not secure a large share of this trade, as their goods are well finished and elegantly shaped. Pointed and narrow shoes will not sell here; the Danish foot is large. Our manufacturers

have studied the German markets, and I think the same styles will find favor here.

Several of the Danish shoe manufacturers have imported American machinery, but the Danish duty on shoes being very light (it varies according to the quality, and I fear it would be misleading to quote it), our manufacturers can no doubt compete in price.

Denmark has a population of about 2,350,000 inhabitants. The Danish shoe manufacturers produce about 4,000 pairs of shoes daily. The imports of foreign shoes are about 40 per cent of the whole consumption.

Manufacturers should address: The Wessel & Vett, 13 Kongeus Myrtov; Skandinavisk Skotöjsmagasin, 35 Östergade; E. Oettinger, 44 Östergade—all of Copenhagen.

Mr. Johan Lund, 4 Laxegade, Copenhagen, is willing to accept agencies.

The commercial agency of R. V. Fournais & Co., Copenhagen, will, for a small fee, rate any firm in Denmark.

JULES BLOM,

COPENHAGEN, *March 23, 1899.*

Vice and Deputy Consul.

UNITED STATES WAGONS AND AGRICULTURAL MACHINES IN GERMANY.

It is beyond doubt that American dealers in agricultural implements and wagons of all kinds could, with proper effort and understanding of existing conditions, have far more business in this section of the German Empire than at present. True, our present trade with this country is not inconsiderable; but it is my conviction that in many instances the American goods sell themselves in spite of the American merchant and manufacturer.

The province of Saxony, of which Magdeburg is the capital and center, forms one of the most important and extensive agricultural districts of the German Empire, and therefore affords a splendid field for the American manufacturer of agricultural implements. But the chief difficulty met by the German importers in introducing American machinery of this kind is their entry in the German custom-house. It is not generally known that there are no national administrative laws for the German custom-houses, but that each state or province is governed by laws of its own; and it might be well for American manufacturers and exporters to always make sure of their ground in this respect before undertaking to make shipments.

A German importer of agricultural machinery in Magdeburg informs me that he has all machines shipped to him knocked down and crated, and then has the different parts put together here.

When American mowers and reapers are supplied with an extra knife, this is not classified as a part of the machine by the custom-house, but is subjected to an extra high rate of duty—the “cutlery rate.” Since it is a part of a machine which consists chiefly of cast iron, it should properly pay only 3 marks (71.4 cents) per 100 kilograms (220.46 pounds). Owing to the gloss of the American oil paint, horserakes and other farm implements are apt to be entered as “lacquered ironware,” at the rate of 10 marks (\$2.38) per 100 kilograms. It was only after a great deal of explanation, my informant tells me, that he succeeded in having this sort of machinery passed at 5 to 6 marks (\$1.19 to \$1.43) per 100 kilograms. The rate of duty on reapers with binding attachment varies in the different custom-houses. In some cities, 3 marks (71.4 cents) per 100 kilograms are demanded; in others, 5 marks (\$1.19) per 100 kilograms. I will add that crates, boxes, etc., protecting the machinery are weighed with the same, and are subject to the same duty.

Considerable difficulty in importing American machinery is also encountered, because, as yet, not sufficient attention has been given to the wants of the German market. It is absolutely necessary that American manufacturers should study the needs of the people here, and then, I feel confident, they will, in most instances, be able to enter into competition with concerns in Europe. Not long ago, I saw in a warehouse a large stock of mills for grinding feed. Upon closer inspection, I found all the machines to be of English make; and when I inquired whether or not American mills were being imported, an object all begrimed and dusty in a remote corner was pointed out to me, which I found to be an American feed mill. When I asked what this meant, I was simply told that “the American work is much too light for this country.”

American farm wagons and other vehicles might also find more extensive sales in the markets of Germany, if more attention were given to the matter. In order to protect the highways, the laws demand that the tires of wheels be much wider than they are in the United States. American manufacturers, until now, have shown no inclination to consider this fact. I know of an instance where a German importer ordered from an American house a few wagons with broad wheels, such as the laws of this country require, but the reply sent to him was that if he would order a thousand wagons the width of the tires would be made as requested. Of course, the order was not given. This can hardly be called an effective way of introducing American goods. For Germany and for most countries of Europe, the wheels of carts, buggies, and other light vehicles should be from 2 to 2½ inches wide, while the tires of farm wagons and trucks should be from 3 to 4 inches in width.

In shipping wagons of all kinds, it must be borne in mind that every vehicle which is entered at the custom-house must pay 150 marks (\$35.70) duty when put together and all complete; but when knocked down and crated, a much lower rate is demanded, viz, 10 marks (\$2.38) per 100 kilograms. However, the lower rate can only be secured when no leather is to be found on or about the vehicle. Nor should the leather parts of any vehicle be shipped in the same case, for, even if a separate bill of lading be presented, the presence of the leather parts in the same cargo will have the effect of changing the classification of the vehicle.

Another mistake made by many American manufacturers and dealers is that they attempt to extend their business in foreign countries by flooding them with printed, illustrated, and descriptive catalogues and circulars, and, of course, in the English language. That money so spent is worse than wasted, goes without saying. A great deal more could be accomplished by sending abroad commercial agents and traveling men fully familiar with the language and business customs of the people of this country. In my judgment, the most effective way to sell American tools and implements and wagons and machinery of all kinds would be to exhibit them here in public, and to have their uses practically demonstrated by live agents.

Because of the great and ever-increasing scarcity of farm laborers in Germany, there is a growing demand for substantial, practical farming tools and machinery; and American manufacturers now have an excellent opportunity for an increased sale of their goods in this line, if they will but make thorough, systematic, and business-like effort.

HENRY W. DIEDERICH,

MAGDEBURG, *February 24, 1899.*

Consul.

OBSTACLES TO EXPORTING MACHINES TO GERMANY.

This consulate is frequently called upon to assist in the adjustment of annoying controversies between American manufacturers of machinery and tools and their German customers, arising from damage to goods in transit, delays in shipments, and vague contracts. These difficulties, unless guarded against more carefully, will become very serious obstacles to the progress of this important and rapidly increasing item of American trade in Germany. Damage to machinery and machine tools in transit has been very frequent, and I have just seen one shipment in which three very valuable machine

tools were completely ruined, the cast-iron frames being broken in several places. It is impossible to ascertain whether the damage was done by the railways in America, the steamship companies, or by the railways in Germany. Nobody seems to be responsible. It is alleged, however, by those interested that these heavy machines are subjected to very rough handling by the steamship companies. It is said that they jerk them out of the vessels with steam cranes, often hooking to frail castings which are not strong enough to sustain the weight. Before accepting damaged machines, the German buyer examines them while in the possession of the railway at the final destination, and they are also exhibited to witnesses before being taken from the depots, resulting in protested drafts, long and disagreeable disputes, and sometimes expensive lawsuits. Delay in the delivery of machines has also in several instances resulted in heavy losses. In one case, an apparatus valued at over \$3,000 was to have been delivered in October, but did not reach Germany until the following February. It had been sold by a German house dealing in American machines, with the agreement that it was to be delivered in November. The result was a suit against the dealer, in which damages for about \$2,000 was demanded, and, in turn, the middleman claimed similar damages against the American manufacturer.

To prevent breakage during shipment, all machines and parts of machines should be boxed, when possible, and the cast frames bolted securely to heavy timbers. In some of these machines, there can be no doubt that the castings are too light for export without careful packing. Contracts should be made in writing when practicable, and should leave no doubt as to where the responsibility of the exporter ends and that of the German importer begins. In several cases, I have found that the American claimed that his responsibility ended when he placed the goods aboard ship in New York Harbor, while the German importer alleged that the goods were to be delivered here in good condition. These points should be fully covered in the contracts, and in cases where regular customers order by cable from catalogues, standing contracts covering all these points should be entered into. Much trouble will also be avoided by detailed specifications, which will prevent disputes as to particular parts of machines, and by the delivery of goods within the specified time. Special care should be taken that the bills of lading show clearly that the machines are in good order, and forwarding agents should be given special instructions to carefully examine them at the seaports for cracks, bends, and breaks, in order that the responsibility for damages may be easily fixed. While the transportation companies can be made to pay for goods damaged in transit, the shipper will

experience many difficulties in compelling settlement where all of the facts are not clear, and where claims are resisted.

Düsseldorf, being the financial center and largest city of the great iron and coal district of the German Empire, has become the leading place in the country for the sale of American machines and machine tools, and a number of firms employing large capital are engaged exclusively in the importation of these goods. Some of these firms—in fact, nearly all of them—remove the plates showing the names of the American manufacturers and replace them with plates bearing their own names as the makers. To avoid all of these difficulties and save the profit of the German middleman, a number of American manufacturing firms have opened permanent offices in this city, with American engineers in charge, where plans and specifications are prepared, estimates made, and contracts entered into. This system is very much more satisfactory to both the manufacturer and the German firms which buy the machines for use. There can be no doubt that many other American machine-tool manufacturers could profitably increase their business by opening offices here, with competent engineers and solicitors.

GEO. P. PETTIT,
Consul.

DÜSSELDORF, *March 22, 1899.*

OPENINGS FOR AMERICAN COAL IN GERMANY AND SWITZERLAND.

Fifty cents per ton in favor of Germany and Belgium is all that prevents the United States from acquiring and controlling the coal and coke trade of Germany and Switzerland. This is the result of careful and oft-repeated calculations.

In considering this question, two points have to be settled—

(1) Is the trade large enough to warrant a special effort on the part of the United States? If so,

(2) What means have to be adopted to secure it?

Switzerland's import of coal and coke for the year 1897, according to statistics, was:

Articles.	Quantity.	Value.	
	<i>Quintals.*</i>	<i>Francs.</i>	
Coal	12,180,473	32,337,677	\$6,241,171
Coke	1,225,067	4,290,195	828,007
Briquettes	2,576,297	7,126,282	1,375,372
Total		43,754,154	8,444,550

* 1 quintal = 220.46 pounds.

In 1898, Switzerland imported from Germany 9,988,608 quintals (998,601 tons) of coal and 1,026,444 quintals (102,644 tons) of coke, which means that of the whole of Germany's export Switzerland took 7.1 per cent of coal and 4.8 per cent of coke. The consumption per head of each man, woman, and child in Switzerland is about 14 francs (\$2.70). According to incomplete statistics, the consumption of coal in 1899 will be at least 10 per cent more than in 1898.

It is impossible to give figures as to the consumption of coal and coke in Germany, as the supply comes from its own mines; but it is an acknowledged fact that German and Belgian coal is inferior to our coal, and lacking in the caloric qualities for which ours is famous.

The center for the distribution of coal and coke for Germany and Switzerland at present is Mannheim, on the Rhine, where, in a free zone, large wharves are established with modern facilities for handling it economically.

In a pamphlet describing the business development and industries of that town, I find the supply of coal and coke arriving by water and shipped again by rail stated as follows:

	Metric tons.*
1890	1, 120, 790
1891	1, 126, 790
1892	1, 257, 892

All was of German and Belgian origin.

Dr. Emminghaus, in his report to the minister of the interior of the Grand Duchy of Baden, to which Mannheim belongs, shows by detailed tables that 2,426,340 metric tons of coal and coke arrived at that place during the year 1897. In the yearly report of the Phal-zischer Handels and Gewerbe Kammer for 1896, I find the following as the ruling wholesale prices per 10,000 kilograms (10 tons, or 22,046 pounds) at the mines:

Description.	Beginning of 1896.	End of 1896.
Common Ruhr machine coal.	\$20.23	\$20.94
Ruhr nut coal (I and II).....	26.18	20.94
Ruhr great coke.....	33.32	40.46
Saar coal:		
I	29.05	29.75
II	19.52	20.23
III	11.90	13.80
Saar great coke.....	32.13	38.08

The retail price of Belgian coal delivered in Berne to-day is 51 francs (\$9.84) per ton; of briquettes, 39 francs (\$7.53) per ton; and of coke, from 45 to 48 francs (\$8.69 to \$9.26) per ton.

The German railroads reduced their freight charges on January 1, 1898, to 70 pfennigs (16 $\frac{2}{3}$ cents) per ton as a fundamental tax,

* 1 metric ton = 2,204.6 pounds.

plus 2.2 pfennigs (0.5 cent) per ton per kilometer for distances up to 100 kilometers (62.137 miles), and beyond 100 kilometers, 1.7 pfennigs (0.4 cent) per ton per kilometer. Nevertheless, these low rates can not compete with those of the enormous freight barges that ply upon the Rhine. One of these barges will hold 3,500 tons, equaling in capacity 175 German railroad freight cars, and three or four of these barges are moved together by a tug. As an example of the low rates charged, I quote the freight on grain from Rotterdam, taken from the side of the vessel, to Mannheim, which averaged during the year 1897 7.56 marks per 2,000 kilograms, or about 90 cents per ton. The great traffic on this water way may be exemplified by a statement taken from a report by the department of agriculture of the Duchy of Baden as to the port of Ludwigshafen, the landing port of Mannheim: Vessels arriving during 1897, 6,896, carrying 797,190 metric tons of freight; vessels departing during 1897, 6,896, carrying 221,334 metric tons of freight.

This perfect water way, accessible from Rotterdam, where the barges are loaded directly from the trans-Atlantic steamers, is of the greatest importance in solving the possibility of introducing American mine products into Switzerland. The river passes all the large German distributing points, such as Cologne, Düsseldorf, Coblenz, Mainz, Mannheim, Ludwigshafen, and Strassburg.

Basel, the frontier town of Switzerland, is connected with the Rhine by a 7-kilometer (4.35 miles) canal, which will be in working order shortly.

Mannheim, however, should not be made the distributing point. The rents in the free zone are high, for the reason that the space is limited and the business established.

Across the river from Strassburg is situated the town of Kehl, in the Duchy of Baden, connected with the Badische Railroad and the German network of railroads, also with the Elsass-Lothringen Railroad, connecting France and Switzerland, and only 50 kilometers (31 miles) by the direct water way to Basel. A free zone could be established there or at Hunigen, near Basel. The rents are low and wharf facilities cheap. I suggest the opening there of a distributing depot for the products of our American mines. Switzerland could be served better and cheaper than from Mannheim. The quality of our coal would soon cause it to be regarded with favor.

In the establishment of as good facilities as are owned by our German competitors, and with a competent man at the head of the enterprise, I see no reason why the present difference in price should not be overcome and a new outlet for our coke ovens and coal mines secured.

ADOLPH L. FRANKENTHAL,

BERNE, *February 20, 1899.*

Consul.

UNITED STATES EXPORTS TO TURKEY.

Consul Marshal Halstead sends the following, dated Birmingham, March 22, 1899:

When the Americans once secure a hold on the markets of the Levant, their vast resources, their business capacity and energy, and the vigilance of their consuls will give them the lead in many classes of goods.

This is the last sentence in a special dispatch, with Vienna date, published in the London Times this morning. The touch of expectation that the vigilance of American consuls will be a factor in this new business drifts into the Times dispatch so naturally that I use it to call attention again to the opinion so generally entertained in Great Britain and on the European continent that the American consular service is unexcelled. At the same time, there is much information in the dispatch that is important commercially, and I give it below in full:

[Special dispatch to London Times, dated March 22, 1899.]

THE UNITED STATES AND TURKEY.

I have had more than one opportunity of sending information published by the *Deutsche Zeitung*, of Vienna, on the active political and commercial propaganda of some of the great powers in Turkey. The same journal now gives a very interesting account of the manner in which the United States is endeavoring to extend its influence in that direction. Sooner or later the European powers will find in the Americans a dangerous rival in the eastern markets. The ground has been prepared already by extensive missionary work. Throughout the whole of Asia Minor and its hinterland there are American missionary establishments, which, like everything American, are organized on a practical basis. Their headquarters are at Smyrna in the west and at Mosul in the east. To each, mission schools are attached, where children learn reading, writing, and arithmetic and are trained as skilled workmen. At Marash, for instance, there is an artisans' school, where no fewer than 1,000 children are being educated.

Hitherto, commercial relations between the United States and Turkey have been of small importance. Ships sailing under the American flag are not frequent visitors at Turkish ports. The last statistics issued, those of the year 1896-97, show that not a single American vessel arrived in the Turkish harbors. Formerly, they used to take petroleum to Turkey; but Russian competition has driven the American oil out of the field. Since the beginning of this year, however, a direct line of steamers between New York and Constantinople has been organized, which promises to stimulate commercial intercourse between the two countries. American goods now no longer require to be transhipped in English or American ports, and this, of course, greatly reduces the cost of transport. The merchandise exported from America to Turkey consists principally of raw iron, hardware, tools, agricultural machines, and other iron manufactured goods, rum, beer, and flour. At the beginning of the year, 1,000,000 kilograms (2,204,600 pounds) of American flour had been imported into Turkey, whereas French and also Hungarian flour had

been refused entrance at the custom-house. The Americans import from Turkey opium, skins and hides, carpets, and cotton of Egyptian growth.

The industrial states of Europe, and, foremost among them, Austria-Hungary, are warned by the *Deutsche Zeitung* of the danger with which they are threatened by American exportation. When the Americans once secure a hold on the markets of the Levant, their vast resources, their business capacity and energy, and the vigilance of their consuls will give them the lead in many classes of goods.

The United States minister at Constantinople, Mr. Straus, says, under date of March 27, 1899:

I have every reason to believe that if enterprising American houses would study this market and establish agencies under American representatives, they would in the course of a short time do a profitable and, in many products and articles of manufacture, a large business. But, in order to extend such trade, it would be advisable to send in the first instance agents with American energy and reliability. A knowledge of the French or German language, or both, would be of great advantage.

TRADE OF SWITZERLAND IN 1898.

From advance sheets of the Bureau of Statistics of Switzerland, the complete work of which will not appear until next August, I am enabled to cull the following facts relating to the trade of Switzerland during 1898:

Description.	1898.	1897.	Increase.
Export	\$139,637,460	\$133,782,459	\$5,855,001
Import	203,766,529	199,025,374	4,741,155
Specie:			
Import	17,164,422	16,061,950	1,102,472
Export	11,063,368	10,472,842	590,526

The increase of the exports is in the following articles, the figures being approximate:

Articles.	Amount.	Articles.	Amount.
Watches	\$960,000	Chocolate	\$260,000
Watch materials	120,000	Embroideries:	
Machines	820,000	Chain stitch.....	340,000
Ironware	200,000	Flat stitch.....	320,000
Fresh fruit.....	132,000	Orgazine and trame.....	400,000
Cheese.....	200,000	Silks	1,400,000

The approximate increase of imports is noted in the following list:

Articles.	Amount.	Articles.	Amount.
Machines	\$1,050,000	Wine.....	\$300,000
Copper.....	520,000	Chemicals and dyes.....	680,000
Watches and materials.....	380,000	Leather and leather goods.....	240,000
Fresh butter.....	120,000	Coal	420,000
Cocoa beans.....	160,000	Coke and briquettes.....	180,000
Eggs.....	60,000	Cotton:	
Meat:		Raw	580,000
Fresh	360,000	Goods.....	400,000
Smoked	180,000	Silks	120,000
Sugar	180,000	Silk and cotton mixed goods.....	60,000

IRON.

At present, Germany dominates the Swiss iron trade. The following table should be of interest to the iron industry of the United States. In compiling it, I have given the total amount of Germany's export and the amount taken by Switzerland, showing the percentage of the whole. This will give a good idea of the market of this Republic.

Iron export of Germany in 1898.

Articles.	Total.	Share of Switzerland.	
		Quintals.*	Per cent.
Scrap and crude iron.....	2,724,705	251,378	9.2
Corner and angular iron.....	2,047,053	414,062	20.2
Railroad frogs and ties.....	308,032	112,841	36.6
Railroad rails.....	1,238,387	173,415	14
Malleable iron in bars.....	2,636,980	209,258	7.9
Lump iron.....	349,636	25,425	7.3
Sheet iron, cold rolled, rough, polished, and lacquered.....	1,576,386	168,231	10.7
Iron wire, rough, coppered, or tinned.....	1,887,132	66,700	3.5
Rough castings.....	295,665	43,949	14.9
Axles for railroad cars and railroad wheels.....	317,209	25,820	8.1
Pipes, welded and drawn.....	302,271	73,491	24.3
Rough ironware.....	1,634,716	142,070	8.7
Machines:			
Mainly cast iron.....	1,318,813	97,795	74.2
Mainly malleable iron.....	291,932	12,982	4.4
Copper:			
Bars and sheet.....	53,686	6,745	12.6
Wire	163,617	24,202	14.8

* 1 quintal = 220.46 pounds.

The eminent civil engineer, Mr. Elmer L. Corthell, of New York and of Mississippi jetties fame, told me, while here and examining the iron and stone bridge just finished by a German firm, that in his judgment nothing would prevent United States bridge companies from successfully competing with the German firms in this line. He also gave it as his opinion that in building iron, the United

States could carry off the trade of Switzerland, provided we would learn to make and give dimensions in metric measurements.

It is useless to offer material measured in feet and inches to a builder who understands practically only meters and centimeters.

I am further assured that it would take little exertion of our companies manufacturing railroad rolling stock, such as car wheels and axles, to get a foothold in Switzerland, if they comply with the demands of the railways. Special attention should be drawn to the fact that Switzerland took nearly one-fourth of the total German export of piping, and one-fifth of angular iron for building purposes.

ADOLPH L. FRANKENTHAL,

BERNE, *March 1, 1899.*

Consul.

EXAMINATION OF AMERICAN FRUITS AND PLANTS IN BELGIUM.

Referring to my report dated February 14, 1899,* I transmit translation of the official notification of the appointment of experts, stationed at Antwerp, Ghent, and Ostende, for the examination of fresh fruits, live plants, and fresh parts of plants sent from the United States, and form of certificate of examination.

GEO. W. ROOSEVELT,

BRUSSELS, *March 9, 1899.*

Consul.

[Translation.]

IMPORTATION AND TRANSIT OF FRESH FRUITS, LIVE PLANTS, AND FRESH PARTS OF PLANTS SENT FROM THE UNITED STATES OF NORTH AMERICA.—EXECUTION OF THE ROYAL ORDER OF FEBRUARY 3, 1899.

The Minister of Agriculture and Public Works, in accordance with article 3 of the royal order of February 3, 1899, relative to the importation of fresh fruits, live plants, and fresh parts of plants sent from the United States of North America, and in accordance with the advice of the Minister of Finance, has ordered:

ARTICLE 1. Messrs. J. Hendrickx, secretary of the agricultural committee of Antwerp, at Borgerhout; G. Staes, assistant at the Government University at Ghent; and J. Pruvost, veterinary doctor at Ostende, are appointed, respectively, at Antwerp, Ghent, and Ostende, to inspect shipments of fruits and plants sent from the United States of North America, and which are not accompanied by a certificate as described in the royal order of the 3d of February, 1899.

ART. 2. Inspection of the objects enumerated in article 2 of the above-mentioned order is to be made at the public warehouse or other place of destination designated by the customs authorities. Unpacking of the packages can not be proceeded with before the arrival of the expert.

*See CONSULAR REPORTS No. 224 (May, 1899), p. 106.

ART. 3. The cost of examination by the experts is fixed at 4 francs (77 cents) per hour, without, however, permitting the amount to exceed 20 francs (\$3.86) per day. Delay resulting from inexact or insufficient direction is at the expense of the person interested.

ART. 4. When the expert recognizes that the packages are free from San José scale, the fact is stated in a certificate conforming to the form annexed to the present order, declaring that the packages may be allowed free circulation in the country.

ART. 5. The present order will go into effect the 15th of March, 1899.

LEON DE BRUYN.

BRUSSELS, *February 23, 1899.*

FORM.—IMPORTATION AND TRANSIT OF FRESH FRUITS, LIVE PLANTS, AND FRESH PARTS OF PLANTS SENT FROM THE UNITED STATES OF NORTH AMERICA.—EXECUTION OF ROYAL DECREE OF FEBRUARY 3, 1899.

Certificate of examination.

Name and domicile of shipper.

Name and domicile of consignee.

Name and nature of packages.

Mark on packages.

The undersigned expert appointed in execution of the royal order of February 3, 1899, declares that he has examined the above-mentioned packages and found them free from San José scale.

In consequence, these packages may be sent to their destination.

The ———, 189 .

THE EXPERT.

AMERICAN BOLTS AND NUTS IN SCOTLAND.

Inquiry has been made at this consulate by a wholesale agent, handling largely bolts and nuts and like articles, for the name and address of a company or firm in the United States manufacturing bolts (round and square, countersunk heads) and cold-cut nuts. He wishes to obtain this particular combination for the Scottish market.

This business man informs me that the American manufacturers are now pushing the Germans very hard for the trade in bolts and nuts in the United Kingdom. The importation of these articles from the United States began about eighteen months ago. For many years, the German manufacturers had little or no foreign competition in these islands for machine-made bolts and nuts; and the British manufacturers could only hold the market for the common square-head bolts. In 1897, bolts and nuts began to come from the United States, and the trade has been growing. Of late, it has been increasing rapidly. In this dealer's opinion, should there be no reduction of prices by the German and no increase of prices by the American manufacturers, the latter will soon get the bulk of the

trade. The process of gaining the market would be easier, he says, if some of the American bolt and nut manufacturers did not persist in sending the goods in packages of 100 and of 50, although they know that it is the custom in the retail trade here to buy bolts and nuts by the gross and half gross.

RUFUS FLEMING,
Consul.

EDINBURGH, *March 20, 1899.*

MOTOR-CARRIAGE EXPOSITION AT BERLIN.

There will be held at Berlin from the 3d to the 28th of September, 1899, an international competitive exhibition of motor carriages, open to all exhibitors.

Exhibits will be classified as follows:

(a) Motor carriages and devices of all kinds for the transport of persons.

(b) Motor wagons for transport of freight.

(c) Motor cycles and trailers.

(d) Motors and accumulators for motor carriages.

(e) Parts and wheels for motor carriages.

(f) All articles relating to motor carriages and not otherwise classified.

The exposition will be held in a covered building known as the Exercier-Haus, 34 and 35 Karl Strasse, which has a superficial area of 2,700 quadrat meters. It will be open daily from 10 a. m. to 6 p. m. It is hoped that before the opening of the exposition the place will be provided with electric light, in which case the exposition will be continued until 9.30 p. m. daily.

A progressive series of tests, races, etc., is in contemplation, the programme for which will be announced by the committee of management at the opening of the exhibition.

The rent of exhibition space will be as follows: For the first 25 square meters of ground or wall space, 10 marks (\$2.38) per square meter; for the second 25 square meters, 8 marks (\$1.90) per square meter; for the third 25 square meters, 6 marks (\$1.42) per square meter; and for all additional space accorded to one exhibitor, 4 marks (90 cents) per square meter.

Not more than two examples of the same class of exhibit will be permitted to each exhibitor.

Intending exhibitors should announce their exhibits as soon as possible, but not later than the 15th of April, either by letter or telegram addressed to the committee as follows: "Internationale Motorwagen Ausstellung Berlin, 1899, Berlin, Universität Strasse

No. 1." With the announcement should be remitted half of the rental for the desired space. Applications for space received after the 15th of April and not later than the 20th will be accorded their due share of whatever space may remain unclaimed on the 15th.

The committee has power to accept or reject any article offered for exhibition, and the applicant will be immediately notified of its decision as to whether his exhibit is accepted or rejected. Space asked for and accorded for which the rental is not paid before the 1st of July will be subject to redistribution to other exhibitors. For the preparation of the catalogue, each exhibitor will be required to furnish not later than the 1st of August two photographs or photographic plates representing his exhibits. Possession of exhibition space as accorded by the committee will be given to exhibitors on the morning of September 1. Articles for exhibition are to be delivered at the exposition at the cost and risk of the exhibitor and should arrive on the 1st or 2d of September. All exhibits must be in place and ready for exhibition by 10 o'clock on the morning of September 3. During the hours of exhibition, the exhibits shall not be covered, but remain open for public inspection, and may not be withdrawn during the continuance of the exposition, except with the consent of the committee of management. All exhibits are to be withdrawn and taken possession of by the owner within twenty-four hours after the close of the exposition.

The price of admission to visitors is fixed at 2 marks (47.6 cents) on the opening day and during other days from 50 pfennigs to 1 mark (11.9 to 23.8 cents); season tickets, 5 marks (\$1.19) each. Exhibitors, their employees, and agents will receive nontransferable tickets, good during the exposition, for the nominal price of 1 mark (23.8 cents).

Neither prizes nor medals will be given. The advantage to exhibitors will be confined to the results of the competitive tests, which will be stated at length in the report of the committee.

FRANK H. MASON,
Consul-General.

BERLIN, *March 15, 1899.*

AUTOMOBILE REGULATIONS IN FRANCE.

Consul-General Gowdy sends from Paris, March 13, 1899, a newspaper clipping containing a synopsis of the regulations for the circulation of automobiles, as follows:

Every type of vehicle employed must offer complete conditions of security in its mechanism, its steering gear, and its brakes. The constructors of automobiles must have the specifications of each type of machine verified by the service des mines. After a certificate of such verification has been granted by the service

des mines, the constructor is at liberty to manufacture an unlimited number of vehicles.

Each vehicle must bear the following indications: (1) The name of the constructor, the indication of the type of machine, and the number of the vehicle in that type; (2) the name and domicile of its owner. No one may drive an automobile who is not the holder of a certificate of capacity delivered by the prefect of the department in which he resides, granted with the consent of the service des mines. A certificate of special capacity will be granted for conductors of motorcycles of a weight inferior to 150 kilograms (330 pounds).

Every proprietor of an automobile should, before using it on the public streets, address a declaration to the prefect, who will acknowledge receipt of such declaration.

The conductor of an automobile must always have the regulation of the speed well in hand. He will slow down or, if necessary, will stop each time the vehicle may be the cause of an accident, of disorder, or of an interruption of the traffic.

In narrow or crowded thoroughfares, the speed must be reduced to walking pace. In no case may the speed exceed 30 kilometers (18.6 miles) an hour in the open country, or 20 kilometers (12.4 miles) an hour when passing houses.

Racing is allowed, provided that authorization be obtained from the prefect and that the mayors be warned. In racing, the speed of 30 kilometers an hour may be exceeded in the open country, but when passing houses the maximum of 20 kilometers must not be exceeded.

The approach of an automobile must, if necessary, be signaled by means of a trumpet. Each automobile must be provided with two lamps—one white, the other green.

BALANCE OF TRADE AND INCREASE IN POPULATION IN GERMANY.

The rapidly increasing population of Germany necessitates a like increase in the imports of provisions and raw material. The masses are neither fed nor clothed from home products, notwithstanding the assertion of the Agrarians that Germany is able to produce sufficient quantities to meet the home demand.

According to estimates of the Statistische Amt, of Berlin, the population of the German Customs Union rose from 50,960,000 in 1893 to 54,530,000 on July 1, 1898; an increase of 3,570,000 during the period of the commercial treaties.

Official statistics show that imports are rapidly growing and that under the existing commercial treaties the exports have also gained, as will be seen by the following tables of imports and exports:

Year.	Imports.	Exports.
1892	\$1,006,000,000	\$750,000,000
1893	984,000,000	772,000,000
1894	1,020,000,000	726,000,000
1895	1,011,000,000	815,000,000
1896	1,085,000,000	893,000,000
1897	1,158,000,000	.....
1898	1,303,000,000	.....

The value of imports has increased by 29.5 per cent and that of exports by 27 per cent.

Together with the expansion of the foreign trade, that of the productive manufacturing forces is apparent. Agriculture does not, however, show a corresponding development. The limits of the grain-growing area can be but slowly extended. Stock raising, with the exception of sheep, appears to prosper. The official figures of this important industry are as follows:

Description.	1892.	1897.	Increase.
	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>
Horses	3,836,000	4,038,000	202,000
Cattle	17,555,000	18,490,000	935,000
Pigs	12,174,000	14,274,000	2,100,000
Sheep	13,589,000	10,866,000	2,723,000

The increase in the value of stock and the produce thereof has aided agriculture vastly. This has not, however, offset the increasing demands for meats.

Industrial growth is shown not only by the increased exports of manufactures, but by the steady output of steam engines. On this subject, the Prussian statistics give these figures:

	Total horsepower.
1888	1, 683, 000
1892	2, 209, 000
1896	2, 950, 000
1897	3, 166, 000
1898	3, 422, 000

Within ten years, the output of steam engines has more than doubled, the strongest development belonging to the period of the commercial treaties. Most significant are the statistics of stationary engines, the manufacture of which during the last three years was as follows:

1896	2, 534, 000
1897	2, 714, 000
1898	2, 947, 000

THOS. EWING MOORE,

WEIMAR, *February 17, 1899.*

Consul.

OPENING FOR STONE CRUSHERS IN GERMANY.

Our manufacturers of stone-crushing outfits, tile ditchers, and sewerage apparatus would, in my opinion, find a market in Germany. This Empire has perhaps the best system of country roads in the world. Not only are new roads being continually built, but the old ones are repaired every five years. The stones are all crushed by

hand with sledge hammers. From the car windows, one can see piles of stone extending for miles along the roads, waiting for the workmen to commence the long and tedious task. In many of the stone quarries, one can see huge piles of uncrushed stone ready to be carted away. An American steam stone crusher would accomplish marvelous things if set up in one of the quarries.

The best method for an American manufacturer, if he wishes to introduce these machines into Germany, is to secure a contract from the Government, either State or municipal, to do a certain amount of work for a definite sum of money. Nobody will buy these machines without having first seen their utility demonstrated.

Ditchers and sewerage apparatus might be introduced into the Prussian provinces, where the soil for the most part is sandy and no rocks would be encountered. Considerable irrigation is also carried on.

ERNEST L. HARRIS,
Consular Agent.

EIBENSTOCK, *March 4, 1899.*

ELECTRIC RAILWAYS IN Breslau.

The city of Breslau is about to grant a charter to the street railroad company for a term of twenty-four years, with privilege of putting the same under electric motive power in place of horsepower, which is used at present. The reconstruction of the roads must be completed within two years after the contract has been approved.

Overhead and underground systems are to be used. The company agrees to take from the city what electric motive and lighting power it may use for the cars; the city binds itself to furnish sufficient power for said purpose, but is not liable for any damages in case of a breakdown at the power house. The fare is to be 10 pfennigs (2.38 cents), with transfer over any of the lines. The city is to receive from the company for the privilege and the use of the streets—after the expenses for power, employees, keeping tracks, cars, and wire in repair are deducted—33⅓ per cent of the receipts. After December 31, 1907, the city and company will share equally in the net profits. At the expiration of this contract, the city has the right to take charge of the property of the company.

The receipts of the horse street railway company of Breslau, during the year ending December 31, 1898, have been \$367,560, or \$18,790 more than in 1897. The various translines have a total length of 50,018 meters (31 miles), and employ 510 horses, of which each does an average daily work of 22.69 kilometers (14 miles) in

single and 25.49 kilometers (15.84 miles) in double harness. Ninety-eight closed and 40 open cars are in use. In the course of last year, 14,470,811 persons were conveyed.

The salaries paid to the 472 employees amounted to \$114,440.28. The net profit was \$60,493.57, which allowed a dividend of 12½ per cent.

C. W. ERDMAN,
Consul.

BRESLAU, *February 25, 1899.*

ELECTRIC STREET RAILROADS IN GERMANY.

Germany is at present making rapid strides in the construction of electric street railroads. I have put myself in communication with the proper authorities in a number of the smaller cities, and learn that a number of electric railroads are either in course of construction or are being planned. In Meissen, Weimar, and Eisleben, the roads are being built. I wish to inform our manufacturers of electric appliances that the following cities are planning the immediate construction of electric plants and electric street railroads: Pforzheim, Trier, Ratisbon, Colmar, Jena, Kaiserslautern, and Worms. There are, no doubt, other cities that are preparing to do the same thing. The population of those above mentioned runs from 15,000 to 50,000. There are still a number of cities of this size in Germany which have no street railways of any kind. Here are not only opportunities for American manufacturers of electric appliances, but for our capitalists as well. Why not secure a concession and take the initiative? A number of towns in Saxony—mere villages a few years ago—have grown through the rapid development of industries into important centers. In many cases, a single long, narrow street runs through the middle of them. If our manufacturers in this line have no representatives in Germany, it is high time that they should send them.

ERNEST L. HARRIS,
Consular Agent.

EIBENSTOCK, *February 25, 1899.*

PRODUCTION AND CONSUMPTION OF COPPER IN 1898.

Consul Stern writes from Bamberg, March 14, 1899:

The development of the electrical industry in Germany is best illustrated by the increase in the consumption of copper. I collate the following interesting figures from statistical returns:

The German copper production, which amounted to 24,688 tons in 1891, had in 1897 risen to 29,468 tons, and is estimated at 30,703 tons for 1898, complete official figures not having been received as yet.

The German copper consumption was as follows: In 1896, 85,160 tons; in 1897, 96,303 tons; and in 1898, 101,518 tons. Since 1892, the German copper consumption has, according to a statement made by Messrs. Hirsch, of Halberstadt, increased by 81 per cent, while the total copper production of the world shows an increase of only 36 per cent for the same period.

Germany's exports of copper ware have risen from 33,093 tons in 1897 to 36,724 tons in 1898; the imports, chiefly composed of goods of American origin, have risen to 2,443 tons, an increase of 837 tons over 1897.

England consumed 106,000 tons in 1898, being a decrease of 4,500 tons from 1897. France consumed 55,000 tons, being about 4,000 tons less than the year before. The copper consumption of East Asia is shown to be 20,000 tons in 1898, and that of Russia 6,600 tons.

The world's total copper production amounted to 396,728 tons in 1897, and is estimated at 420,000 tons for 1898. By far the greater part of this increase in production is to be looked for in the United States, whose production was 216,000 tons in 1897 and 234,272 tons in 1898.

It is particularly interesting to note, as showing the immense development of our electrical industry, that the copper consumption of the United States in 1898 has been more than one-fourth of the copper production of the whole world—viz, 115,935 tons—and that our country has outstripped the leading nations of Europe in industries employing this material.

Commercial Agent Atwell, of Roubaix, under date of March 22, 1899, says that the *Revue de la Semaine* gives the following table, showing the copper production of the world for the years

1895-1898; increase being shown principally in Australia and the United States:

Country.	1898.	1897.	1896.	1895.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Algeria	50	.....	.....	35
Argentine Republic.....	125	200	100	150
Australia	18,000	17,000	11,000	10,000
Austria	1,100	1,210	1,075	1,110
Bolivia	2,050	2,200	2,000	2,250
Canada	8,040	5,905	4,000	4,000
Chile	24,850	21,900	23,500	22,075
Cape of Good Hope.....	7,060	7,440	7,450	7,080
England	550	555	555	580
Germany	20,085	20,145	20,065	16,555
Hungary	430	445	210	200
Italy	3,435	3,480	3,400	2,500
Japan.....	25,175	23,000	21,000	18,430
Mexico	10,435	11,370	11,150	11,620
Newfoundland	2,100	1,800	1,800	1,800
Norway	3,615	3,450	2,500	2,685
Peru	3,040	1,000	740	450
Russia.....	6,000	6,025	5,100	5,280
Sweden.....	480	545	500	515
Spain and Portugal.....	53,225	54,060	53,325	54,950
United States.....	234,261	215,460	203,893	172,297
Total	424,126	397,190	373,363	334,562
Average price January 1 of each year.....	\$250.08	\$238.97	\$229.85	\$208.40

COFFEE TRADE IN HAMBURG.

Much has recently been written regarding the increasing consumption of coffee in the United States. It may not be without interest to see some figures regarding its importation into Germany, where the average person indulges in the fragrant beverage from three to four times a day.

Hamburg is known to be one of the greatest coffee markets of the world; coffee is its most important article of trade. In the course of the last half century, this line has developed to enormous proportions. In 1849, imports amounted to about 75,000,000 pounds; in 1898, they reached 440,000,000 pounds, exceeding those of any previous year.

The year 1898 was, however, an unfavorable one for the trade, on the whole, owing to the continuous downward tendency of prices. In 1896, the price went down 30 per cent, and in 1897 the reductions continued, until they were 45 per cent lower than at any previous period. Although there was but a small reduction in 1898 below 1897, the additional slight decline was like the last straw on the camel's back. In 1898, the price of good average Santos was $31\frac{1}{4}$

pfennigs (7.4 cents) per pound, as against $33\frac{1}{2}$ pfennigs (7.97 cents) in the previous year.

About half of all the coffee imported comes from Santos, Brazil; but all sorts are used.

The stocks of coffee kept on hand correspond to the importance of the trade. At the beginning of this year, they amounted to nearly 100,000,000 pounds, or more than six times as much as fifty years ago.

In 1897, the sales on the exchange at Hamburg reached a grand total of 3,783,000 sacks. In 1898, they were a fraction less, or 3,639,500 sacks.

W. K. ANDERSON,

HANOVER, *March 15, 1899.*

Consul.

THE WORLD'S COFFEE TRADE IN 1898.

The following statistics will convey a fairly complete impression of the volume of the world's coffee trade and of the relative importance of the various producing and consuming countries:

*World's production.**

Country.	1899-1900.†	1898-99.†	1897-98.	1896-97.	1895-96.
Brazil:	<i>Bags (132 lbs.).</i>	<i>Bags (132 lbs.).</i>	<i>Bags (132 lbs.).</i>	<i>Bags (132 lbs.).</i>	<i>Bags (132 lbs.).</i>
Rio.....	3,250,000	3,000,000	4,530,000	3,411,000	2,390,000
Santos	5,750,000	5,000,000	6,050,000	4,960,000	3,135,000
Victoria.....	400,000	350,000	450,000	308,000	300,000
Bahia and Ceara.....	400,000	370,000	440,000	290,000	425,000
Java	550,000	244,000	772,000	705,000	672,000
Padang	55,000	52,000	45,000	66,000	59,000
Celebes	23,000	35,000	45,000	43,000	48,000
Ceylon and British India.....	330,000	267,000	240,000	280,000	300,000
Venezuela	850,000	900,000	775,000	1,000,000	1,000,000
Costa Rica.....	250,000	297,000	295,000	290,000	190,000
Mexico.....	350,000	325,000	300,000	250,000	300,000
Guatemala.....	425,000	475,000	850,000	800,000	900,000
San Salvador.....	120,000	150,000			
Nicaragua	80,000	100,000			
Haiti.....	475,000	485,000			
Puerto Rico.....	200,000	260,000	250,000	300,000	260,000
Jamaica and British West Indies.....	100,000	100,000	100,000	100,000	125,000
Total	13,608,000	12,410,000	15,574,000	13,153,000	10,634,000

* Dunring & Toon's figures.

† Estimated.

The coffee-crop year counts from July 1 to June 30, and the figures for the first two years are estimates, which seem very conservative, particularly with respect to Brazil, where the arrivals in Santos from July 1 to December 31, 1898, were 3,800,000 bags, and at Rio 1,760,000 bags. According to the best accounts now current, the estimates for the coming season are likewise about 500,000 bags too

low for Brazil. Owing to the low prices prevailing abroad, however, and in spite of the heavy premium paid to the planters in the shape of the depreciated paper currency—gold being quoted at present at 260 per cent—the top notch in production was probably reached in 1897–98, with 15,500,000 bags of 132 pounds each, or 2,046,000,000 pounds.

Shipments from Santos and Rio de Janeiro.

To—	Santos.		Rio de Janeiro.	
	1898.	1897.	1898.	1897.
	<i>Bags.</i>	<i>Bags.</i>	<i>Bags.</i>	<i>Bags.</i>
New York.....	1,484,098	1,427,460	2,134,971	2,355,798
New Orleans.....	27,472	44,806	174,035	250,806
Baltimore.....	32,287	19,633	150,589	191,598
Charleston.....		7,800		
Hamburg.....	1,365,266	1,211,416	326,523	458,270
Bremen.....	53,998	58,800	1,251	1,275
Havre.....	731,315	986,645	61,781	87,187
Marseilles.....	75,834	57,593	118,610	137,977
Bordeaux.....	4,571	7,186	14,104	32,714
Rotterdam.....	776,940	621,199	1,940	5,909
Antwerp.....	398,475	485,966	59,147	101,264
Trieste.....	439,904	376,689	71,594	109,338
Venice.....	11,750	32,135	1,000	500
Fiume.....	12,261	7,256		
Genoa.....	73,000	59,119	55,210	57,136
Copenhagen.....	47,290	45,425	60,992	67,240
Alexandria, Smyrna.....	27,300		28,742	
Constantinople.....	1,000	18,149	37,504	87,106
Salonica.....	250		19,526	
Odessa.....	801		15,192	
London.....	58,094	45,972	8,929	16,850
Southampton.....	1,764	260	12,804	19,785
Algiers.....		375	14,717	13,916
Lisbon, Gibraltar.....	5,600	116		585
Cape Town.....			124,772	153,030
River Plata.....	1,868	146	85,301	69,947
Channel, f. o.....	47,800	59,800		
Valparaiso.....			6,410	3,639
Coastwise, Rio de Janeiro.....	27,665	46,536	189,206	217,976
Total.....	5,706,607	5,620,572	3,711,459	4,453,926

The history of coffee export from Brazil begins at Rio in the year 1817, when 63,986 bags were shipped. In 1832, the figures stood at 478,950 bags, in 1840, 1,000,000 bags was reached; in 1851, the figures exceeded 2,000,000 bags, and kept at that average until 1875, when exports amounted to over 3,000,000 bags. In 1881, the highest mark was attained at 4,377,418 bags. In later years, the number began to decline, owing to the exhaustion of the productive power of the trees in the old districts. At Santos, the records go back to 1850, when nearly 100,000 bags left this port. In 1871, the exports had grown to 500,000 bags; in 1877, to 1,000,000 bags; they increased, in 1884, to 2,000,000 bags; in 1890, to 3,000,000 bags; in 1894, to 4,000,000 bags; in 1896, to 5,000,000 bags; in 1897–98, to 6,000,000

bags, near which figure production in this district is likely to maintain itself as long as the present economic conditions prevail, although the area available for coffee planting in this State is practically inexhaustible, and no soil more appropriate for the purpose exists in the world.

For 1898-99, the Rio and Santos crops are estimated at 8,500,000 bags, and the visible supply, meaning the stocks in Rio, Santos, afloat, and in the public warehouses in Europe and the United States, had increased to 6,576,000 bags on January 1, 1899. The enormously heavier deliveries of the last year are no doubt to be accounted for by reason of the present low prices of coffee, which latter are again a consequence of the extended Brazilian production. It would be a mistake, however, to regard these larger deliveries as evidence of similarly enlarged consumption. While lower prices encourage a more widespread drinking of coffee, they enable the grocers to carry a larger stock on the same capital, and it is a well-known maxim in trade that depreciated values cause an accumulation of supplies in second and third hands, technically termed the "invisible supply."

In the United States, the deliveries of Brazilian coffee were in the following proportions:

Year.	Brazil.	Other kinds.	Total.
	<i>Bags.</i>	<i>Bags.</i>	<i>Bags.</i>
1892-93.....	8,392,492	1,006,057	4,398,549
1893-94.....	3,160,717	1,138,128	4,298,845
1894-95.....	3,167,840	1,228,106	4,395,946
1895-96.....	3,142,140	1,196,988	4,339,128
1896-97.....	3,980,057	1,099,537	5,088,594
1897-98.....	5,085,705	1,251,631	6,337,336
1898-99 (6 months).....	2,002,757	430,357	2,433,114

The consumption of coffee in the principal coffee-drinking countries of Europe has been as follows, according to Dunring & Toon:

Country.	Consumption in January-November.					Import duties per pound.
	1898.	1897.	1896.	1895.	1894.	
	<i>Tons.*</i>	<i>Tons.*</i>	<i>Tons.*</i>	<i>Tons.*</i>	<i>Tons.*</i>	<i>Cents.</i>
Germany.....	142,430	125,790	119,900	113,920	112,837	6
France.....	71,980	70,140	68,410	66,100	63,230	15
Austria-Hungary.....	†39,130	35,880	31,850	34,150	33,057	3½
United Kingdom.....	11,690	11,460	11,480	11,600	11,300	3½
Belgium.....	28,210	25,570	22,830	22,000	21,373	1½
Switzerland.....	†9,900	8,470	8,010	6,900	6,800	0½
Total.....	303,340	277,310	262,480	254,670	248,597	.....
All Europe (12 months).....	500,170	468,710	438,630	400,320	391,050	.....

* About 17 bags, or 2,244 pounds.

† Estimated.

The export tax levied in Brazil by the State governments is 11 per cent ad valorem. Holland and the United States are the only countries admitting coffee free of duty, and in both countries the per capita consumption stands higher than elsewhere, except in Belgium. The repressive influence of high import duties is undeniable. France, where the tax is almost prohibitive, stands lowest on the list. In England and Russia, the preference is given to tea.

The leading position of the United States as a coffee-using country—consuming now over 40 per cent of all the coffee disposed of in the world—should make its commercial friendship a valuable desideratum to all sellers of this product, and entitle it to corresponding trade concessions from the latter. This proposition applies with particular force at the present time of over-production, when the buyer holds the balance of power, and any additional onus in the shape of taxes would have to be borne by the producer.

JULIAN HAUGWITZ,

SANTOS, February 11, 1899.

Vice-Consul.

GERMANY'S WINE AND GRAPE TRADE IN 1898.

I give below statistics of the imports and exports of wine and grapes in the last two years.

Import.

Whence imported.	Quantity.	Value.
<i>Wine and must in casks.</i>		
	<i>Cwts.</i>	
France.....	622,589	.....
Greece.....	27,489	.....
Italy.....	89,689	.....
Austria-Hungary.....	149,807	.....
Portugal.....	67,958	.....
Switzerland.....	5,027	.....
Spain.....	183,715	.....
Turkey.....	65,164	.....
Algeria.....	9,464	.....
Chile.....	3,634	.....
United States.....	14,319	.....
Other countries.....	8,166	.....
Total in 1898.....	1,247,021	\$7,608,622
Total in 1897.....	1,249,626	7,617,904
Decrease in 1898.....	2,605	9,282
<i>Red wine for blending.</i>		
France.....	39,690	.....
Greece.....	7,849	.....
Italy.....	164,777	.....
Austria-Hungary.....	10,162	.....
Other countries.....	13,752	.....
Total in 1898.....	236,230	690,200
Total in 1897.....	210,051	622,132
Increase in 1898.....	26,179	68,068

Import—Continued.

Whence imported.	Quantity.	Value.
<i>Wine for distilling brandy.</i>		
	<i>Cwts.</i>	
France.....	2,314	.....
Italy.....	5,673	.....
Other countries.....	1,856	.....
Total in 1898.....	9,843	\$23,800
Total in 1897.....	11,285	27,608
Decrease in 1898.....	1,442	3,808
<i>Sparkling wine (champagne).</i>		
France.....	58,913	.....
Other countries.....	473	.....
Total in 1898.....	59,386	1,433,950
Total in 1897.....	54,047	1,315,664
Increase in 1898.....	5,339	118,286
<i>Wine, other than sparkling.</i>		
France.....	9,231	.....
Austria-Hungary.....	1,408	.....
Other countries.....	4,092	.....
Total in 1898.....	14,731	267,512
Total in 1897.....	17,218	339,150
Decrease in 1898.....	2,487	71,638
<i>Spirits in casks.</i>		
France.....	48,098	.....
Great Britain.....	11,272	.....
Netherlands.....	8,575	.....
Netherlands colonies.....	7,385	.....
British West Indies.....	17,943	.....
United States.....	1,845	.....
Other countries.....	3,548	.....
Total in 1898.....	98,666	1,558,424
Total in 1897.....	103,846	1,723,596
Decrease in 1898.....	5,180	165,172
<i>Spirits in bottles.</i>		
France.....	2,890	.....
Other countries.....	1,007	.....
Total in 1898.....	3,897	182,070
Total in 1897.....	3,564	164,934
Increase in 1898.....	333	17,136
<i>Grapes and dessert grapes.</i>		
France.....	6,987	.....
Italy.....	148,849	.....
Austria-Hungary.....	13,758	.....
Portugal.....	3,850	.....
Spain.....	8,778	.....
Other countries.....	3,509	.....
Total in 1898.....	185,731	854,658
Total in 1897.....	153,094	680,918
Increase in 1898.....	32,637	173,740

Import—Continued.

Whence imported.	Quantity.	Value.
<i>Common grapes.</i>		
France.....	<i>Cwts.</i> 85,971	.....
Italy.....	362,540	.....
Austria-Hungary.....	81,578	.....
Other countries.....	10,058	.....
Total in 1898.....	540,147	\$1,020,306
Total in 1897.....	269,921	520,982
Increase in 1898.....	270,226	499,324

Export.

Whither exported.	Quantity.	Value.
<i>Wine and must in casks.</i>		
Belgium.....	<i>Cwts.</i> 41,065	.....
Denmark.....	3,577	.....
Finland.....	4,296	.....
France.....	19,624	.....
Great Britain.....	29,880	.....
Netherlands.....	19,885	.....
Austria-Hungary.....	7,224	.....
Russia.....	14,401	.....
Sweden.....	4,954	.....
Switzerland.....	61,314	.....
United States.....	71,607	.....
Other countries.....	9,576	.....
Total in 1898.....	287,403	\$2,080,120
Total in 1897.....	296,502	2,232,440
Decrease in 1898.....	9,099	152,320
<i>Sparkling wine.</i>		
Belgium.....	3,427	.....
Great Britain.....	23,181	.....
United States.....	1,768	.....
Other countries.....	11,268	.....
Total in 1898.....	39,644	484,568
Total in 1897.....	35,275	431,256
Increase in 1898.....	4,369	53,312
<i>Wine, other than sparkling.</i>		
Free port, Hamburg.....	2,611	.....
Belgium.....	4,373	.....
Finland.....	1,819	.....
France.....	2,941	.....
Great Britain.....	74,197	.....
Netherlands.....	15,853	.....
Norway.....	1,903	.....
Austria-Hungary.....	6,624	.....
Russia.....	2,300	.....
Sweden.....	4,109	.....
Switzerland.....	1,718	.....
German Africa.....	1,586	.....
British India.....	1,821	.....
China.....	3,392	.....
Netherlands colonies.....	1,760	.....
Brazil.....	1,636	.....

Export—Continued.

Whither exported.	Quantity.	Value.
<i>Wine, other than sparkling—Continued.</i>		
United States.....	<i>Cwts.</i> 31,625	
Other countries.....	15,010	
Total in 1898.....	175,279	\$2,767,940
Total in 1897.....	169,118	2,671,074
Increase in 1898.....	6,161	96,866
<i>Spirits in casks.</i>		
Free port, Hamburg.....	5,121	
German West Africa.....	14,579	
French West Africa.....	3,880	
Other countries.....	20,265	
Total in 1898.....	43,835	116,144
Total in 1897.....	53,611	108,762
Decrease in 1898.....	9,776	
Increase in 1898.....		7,382
<i>Spirits in bottles.</i>		
British West Africa.....	127,366	
German West Africa.....	22,737	
French West Africa.....	25,412	
Portuguese East Africa.....	2,252	
Portuguese West Africa.....	11,992	
Japan.....	165,803	
Brazil.....	5,227	
Other countries.....	29,823	
Total in 1898.....	390,612	1,281,154
Total in 1897.....	305,091	1,327,088
Increase in 1898.....	85,521	
Decrease in 1898.....		45,934
<i>Desert grapes</i>		
Switzerland.....	178	
Other countries.....	360	
Total in 1898.....	538	3,570
Total in 1897.....	474	3,094
Increase in 1898.....	64	476
<i>Common grapes.</i>		
Switzerland.....	46	
Other countries.....	72	
Total in 1898.....	118	238
Total in 1897.....	285	714
Decrease in 1898.....	167	476

WALTER SCHUMANN,
Consul.

MAINZ, February 28, 1899.

BRANDY MAKING IN FRANCE.

The consular district of La Rochelle covers what is essentially the brandy-producing section of France. Formerly—in days before our California brandy was known in the States along the Atlantic seaboard—this region produced the greatest quantity. Few days in a year passed when an American ship was not in this port discharging lumber or loading wines and brandies. As Americans are buying large quantities of this brandy, it may be of interest for them to hear something about it by other means than trade circulars.

Synonyms: Brandy, Cognac, Eau-de-vie.

Kinds: Named after locality in which wine is grown, "Charente brandies," being a general name applied to the product from the departments known as La Charente and La Charente Inférieure; Grande champagne, Petite champagne, Bois, and Borderies indicating certain local products which have some individual quality due to the soil of the immediate and limited district where grown.

Definition: Brandy is the product of the distillation of grape wine.

The districts known as the Charente, Charente Inférieure, Vienne, and Haute Vienne are the chief localities of production. Although fine white wines are produced in many other departments, they do not turn out good brandy; in fact, the wines from which some of the best cognacs are made are simply undrinkable, so acrid and pungent are they. On the other hand, the fine table wines from Bordeaux and the Gironde generally are said to make very poor brandy.

The two Charentes are the principal producers of brandy, yielding wines in about the following proportion: Charente Inférieure, four-fifths; Charente, one-fifth. While the Charente Inférieure produces four times the quantity, the Charente probably distills fourteen-fifteenths of all brandy wines of this region. The following figures give the vintages of the two Charentes for the last three years:

Year.	Charente Inférieure.		Charente.	
	<i>Hectoliters.</i>	<i>Gallons.</i>	<i>Hectoliters.</i>	<i>Gallons.</i>
1896.....	948,945	25,052,148	233,968	6,176,755
1897.....	253,863	6,701,883	53,895	1,422,828
1898.....	662,923	17,500,903	182,679	4,822,726

Few, if any, of the great brandy makers have vineyards sufficient to supply their needs for distilling. The wine is largely produced by the country people, who sell it by sample to the manufacturer and

merchant. In many instances, the grower distills his own wine and sells the brandy to large Cognac houses.

Blending brandy, as carried on by the well-known house of James Hennessy & Co., of Cognac, consists of mixing brandies of the same year's growth from different sections, so as to secure a certain flavor which is known by the name of the firm. Much experience and care are necessary in order that a uniform flavor be obtained year after year.

Age alone should give color to brandy. James Hennessy & Co. have 22 acres of sheds or stone storehouses in which brandy is kept. Age imparts two qualities, color and aroma. My investigation took me to the stores of the well-known La Rochelle brandy merchant, Ch. Barré, who showed me brandy made from the vintage of 1898, with about 55 per cent alcohol, and some of the vintage of 1840, with about 35 per cent alcohol. The former was as clear and colorless as distilled water, with a characteristic odor, which was hardly aromatic; the latter was of a dark-amber color and very fragrant, giving off what is called the "bouquet." In order to produce the color and aroma, oak casks are used, the material for which is selected only from trees grown in certain parts of France and Italy. It has also been suggested that burnt sugar makes a good brandy color.

The vineyards in this vicinity are nearly all planted with American vines. The introduction of vines from the United States several decades ago brought also the phylloxera, which almost completely destroyed the magnificent vineyards which stretched for 75 miles along either side of the River Charente. The parasite does not affect to any marked degree the American vines, so these have been planted, and, by grafting or budding, the French grape is produced. The hillsides and valleys are again being covered with vineyards, and the future promises more prosperity to this part of France than the past ever knew.

I give below a report on the same subject from Mr. E. Jouard, United States consular agent at Cognac.

GEORGE H. JACKSON,
Consul.

LA ROCHELLE, *March 15, 1899.*

REPORT FROM COGNAC.

Many changes have taken place since Arnaud de Villeneuve (fourteenth century) granted hydrated alcohol, whose fabrication had been made known by the Arabs, the virtue of "bracing the memory and life, warming the stomach, and giving high spirits." Medical science has confirmed some of these properties, invalidated others, and discovered a few new ones.

The method of distillation has been improved, especially during the last few years, since the discovery of the exact theory of alcoholic fermentation and with the aid of Pasteur's studies. The value of the different growths has been established little by little, and French brandies, as is well known, have taken a high place generally. Among French brandies, those of the Charentes have won a wide reputation, which time has enhanced.

In the manufacture and sale of several national productions, France complains very much of competition of other countries; but there are two classes of goods which defy foreign rivalry. Even by copying the process of culture and fabrication, no other country, it would seem, can compete with the famous wines of Burgundy, Bordeaux, and Champagne. Nor can the "Fines champagnes" and Charentes brandies be imitated, as the proper climate and soil are lacking in other localities.

On the left side of the River Charente is an immense plain, at one end of which lies the city of Cognac. This is the Grande champagne district, where are planted the vines from which are made these brandies. The Petite champagne section, around the cities of Chateaufort, Barbezieux, and Jonzac, yields products a little inferior in quality, but still excellent.

On the right side of the river is the Bois, so called because the vines cover hills formerly wooded. The products of the Bois, mixed with the champagnes, give the commercial brandy taste, flavor, and strength.

The crop of 1898 was inferior in quantity to the average, due to the continued dryness of the summer; but the quality classes it with the very best.

The prices of wines have reached 76 francs (\$14.66) per hogshead for the Bois, 85 francs (\$16.40) for Borderies, and 110 francs (\$21.23) for the champagnes.

The results of the production of pure wine-distilled spirits (200°) in the district of Cognac, exclusive of the districts of Saintes, St. Jean d'Angély, and Ile de Ré (from official sources), were:

Vintage.	Pure spirits.	
	<i>Hectoliters.</i>	<i>Gallons.</i>
1893-94	32,688	862,963
1894-95	11,052	291,773
1895-96	15,408	406,771
1896-97	25,730	679,272
1897-98	4,977	131,393

As the official year (for distillation) runs from the 1st of October to the 30th of September, no true estimate can be given as yet for 1898-99.

In the last year (1898), 2,519,819 English gallons of brandy were shipped to England.

In the last quarter of 1898, the United States received from the Cognac consular district 19,305 cases and 1,161 hectoliters in bulk, amounting in value to 2,597,441.98 francs (\$501,306).

DECLINE OF TEXTILE INDUSTRY IN ALSACE-LORRAINE.

The manufacture of textiles in Alsace-Lorraine has always been considered one of the leading industries in Germany. For the last two or three years, the manufacturers have been complaining that it is nearly impossible to produce at prices which would enable them to obtain a profit. Not long ago *Der Konfektionær*, a prominent weekly publication at Berlin, said:

The Alsatian textile industry at the close of 1898 showed signs of a serious crisis. The last years have been very unfavorable for the cotton industry. Market conditions have been so bad that the best establishments had to work either at a loss or without profit. Some of the largest firms have already gone out of business; others have reduced their producing facilities. Those in a position to know, claim that the industry is going down as rapidly as it rose.

A correspondent of the *Basler Nachrichten* says that the causes for this deplorable condition are to be found in the establishment of too many factories within the last ten years, in the expectation of an enlarged home consumption, and especially of an increased demand from foreign countries. The writer adds:

The calculations proved to be wrong, especially in the export trade. The fact that America and Russia are trying in every way to make themselves independent of the industrial states of western Europe is felt deeply.

The same testimony is borne by other publications.

I submit below records of this consulate as to the exports of textile goods declared for the United States, these exports coming only from places in Alsace-Lorraine. The district of the consulate at Kehl, it must be borne in mind, comprises all of the province of Lorraine and that of Alsace, with the exception of the part in which the cities of Colmar and Muelhausen are located.

The exports of woolen and other goods usually termed "textiles" from this consular district to the United States aggregated:

1896.....	\$319, 370. 04
1897.....	241, 707. 22
1898.....	170, 405. 73

During the months of January and February, the exports from this consular district were:

1897.....	\$85, 236. 73
1898.....	64, 896. 58
1899.....	23, 406. 66

As to the places from which these exports came, the records show the following:

Exports in January and February.

From—	1897.	1898.	1899.
Markkirch	\$73,736.69	\$60,505.95	\$19,418.44
Saargemuend	5,598.42	1,905.60	2,140.57
Leberau	4,187.60	2,484.03	1,847.65
Saarunion	1,229.70		
Bischweiler	484.32		

The foregoing figures support the statements of the press and the manufacturers as to the general decline of the textile industry of Alsace-Lorraine.

MAX J. BAEHR,
Consul.

KEHL, March 13, 1899.

DUTY ON MEATS IN GERMANY.

The German Butcher Paper is agitating the raising of the duty on American sausage. It says:

Competent officials are of the opinion that the American smoked sausage, on account of its changed composition and method of manufacture, must be placed under the head of "Sausage for better table enjoyment," and no more under "Common sausage." With such a change, however, is joined a raising of the conventional duty from 17 marks (\$4.05) to 60 marks (\$14.28) per 100 kilograms.

The present duty and tax on meat, fish, and fowl which arrive here from the United States is as follows, per 100 kilograms (220.46 pounds):

Meat, cut up, fresh, and preserved, also extract of meat.....	\$4. 76
Fish:	
Fresh	Free.
Salted, dried, smoked, and boiled (with the exception of herrings).....	. 71
In vinegar or oil.....	2. 86
Canned or in other packing.....	14. 28
Fowl and game.....	7. 14

The convention between Germany and Austria-Hungary provides the following exceptions of the above tariff on meat, fowl, and game:

Pork, cut up, fresh, and preserved (lard excepted).....	\$4. 05
Meat, cut up and fresh (pork excepted).....	3. 57
Fowl.....	2. 86
Game	4. 76

In addition to the foregoing tariff there is a local tax of \$2.86 per 100 kilograms on meat, fowl, and game if the same is brought into Breslau.

It will be seen from the above that the duty on meat, fowl, and game imported from Austria-Hungary into Germany is considerably less than on the same articles imported from the United States.

C. W. ERDMAN,
Consul.

BRESLAU, *March 17, 1899.*

AMERICAN HORSE MEAT IN NORWAY.

Consul Nelson, of Bergen, sends, under date of January 23, 1899, the following translation of an article in the Bergen Aftenblad:

A recent edition of an American newspaper contains an article on the horse-meat trade in the United States. The article says that there is a large factory of horse meat at which inspectors rarely, if ever, call, as the firm has given a guaranty not to sell horse meat in any form in the United States.

It is known, however, that this firm has shipped large quantities of horse meat to Norway, where it is much sought after as a delicacy. This delicacy—to say the least about it—is of a rather doubtful nature; for, according to the newspaper referred to, old horses and mules are used for meat purposes. The meat is cut, salted, packed, and then shipped to Christiania.

The newspaper officials have tried to find out more about this trade. We know for certain that a large amount of horse meat is imported from America and England. It is cut into pieces, salted a little, and packed in barrels. Large quantities of this meat are used in sausage factories.

It is impossible to inspect this meat properly or to ascertain whether it comes from sick or "dead" horses. Then, again, as this meat is cut in small pieces, a barrel can contain both good and bad. In only a few cases are the recommendations of the health authorities obeyed with regard to these "delicacies."

This is evidently a very unjustifiable method of procedure. The best and most natural way would be to forbid the importation of horse meat; but if we do not carry the matter so far, we ought to take some other measure. There should be a health certificate on all kinds of meat, and this should be signed by the Norwegian consul. Furthermore, the meat should not be imported in small pieces, and not less than one-half or one-fourth of the animal should be admitted.

A copy of the above was referred to the Department of Agriculture. The Department says, in reply:

The meat of horses is entitled to the same inspection in this country as that of other animals. If the Government of Norway is suspicious of the character of the horse meat shipped to that country from this, it might require that such meat be accompanied by a certificate of inspection by the officers of this Government. In that case, there would be a certainty that the meat was the product of horses in good condition as to health, and that the meat was sound and wholesome at the time it was inspected.

THE LOFODEN FISHERIES.

There is a very large traffic carried on with the Lofoden Islands during the fishing season, and it is estimated that often between 35,000 and 40,000 men are engaged, and during the busiest time, which is toward the end of March, as many as 7,000 vessels of various kinds are in these waters. Of course, it requires a large number of hooks, nets, etc., to supply these men with the necessary gear for catching fish, and heavy losses are often sustained. It is estimated that the annual loss in the various kinds of gear employed in these fisheries alone amounts to from \$175,000 to \$250,000. Needless to say, this loss has to be replaced by new material, and it has occurred to me that United States manufacturers might supply this annual deficiency. Of course, some sacrifice would have to be made before trade could be established, as the people here are conservative; but by judicious management, American goods of all kinds could gain a sure foothold in Scandinavia.

When steamships were first used in the Lofoden fishing trade, they met with violent opposition, the fishermen looking on them with distrust; to-day, nearly nine-tenths of the trade with the Lofoden Islands and the north of Norway is carried on by steamers.

There are generally seven doctors appointed every year to look after the men engaged in this trade, and, in addition to these, there are some four or five in the other fishing districts. These physicians attend about 8,000 or 9,000 patients every year, and there are often between 500 and 600 in the hospitals. Medical attendance is supplied to these fishermen free of charge, the doctors being paid out of the medical fund, which is kept up by levying a tax on all fish and fish products exported.

There are several clergymen stationed permanently in different parts of this district, and four State chaplains are in attendance during the fishing season. Five libraries have been established, as well as four night schools; and during the last few years, many fishermen's homes have been opened in different places. As a rule, the people are orderly and sober.

There are twenty telegraph stations in operation in the Lofoden district, and, during the past four months of the year 1897, over 96,000 telegrams were sent and received. The cost to the Government to keep up these and other offices is about \$10,000 to \$12,000 a year.

Several life-saving sailing vessels and a fine steamer are stationed in various parts of this district. In the year 1897, there were 35 wrecks, 18 men drowned, and 139 men saved. In 1896, there were 25 wrecks and 22 men drowned and 81 saved.

There is an insurance company in the Lofoden Islands, and upon the payment of about 25 cents a year a fisherman can have his life insured for \$53 or \$54 (about 200 kroner).

The estimated number of fish caught every year is 15,000,000 to 18,000,000 cod and 25,000,000 medium-sized fish, the value of which, when bought from the fishermen, is \$1,500,000 to \$2,000,000.

VICTOR E. NELSON,

BERGEN, *February 23, 1899.*

Consul.

PROJECTED RAILROADS IN NORWAY.

I submit the following information, which I believe will be of interest to our manufacturers. I hope that at least some of the contracts will be secured by them, and I am willing to do anything in my power to aid them in supplying the prospective demand for rails, locomotives, cars, railroad tools, etc.

It may be well to add that as our merchants will have to compete with English and German manufacturers, it would be advisable to allow the same credits (from sixty to ninety days) as these houses give.

The board of public works has proposed an extension of the Norwegian railroad system, and the basis of construction is a public loan of about 48,000,000 kroner (\$12,864,000)—12,000,000 kroner (\$3,216,000) a year for the next four fiscal years. This plan, however, has the proviso that if the stations on the Ofot and the Christiania East lines are not included in this work, the loan will only be 8,000,000 kroner (\$2,144,000) a year for the next four fiscal years. Some of the Government officials desire to reduce the estimates to 5,000,000 kroner (\$1,340,000) a year, on account of financial considerations.

According to the foregoing plan, the different lines will be opened for traffic as follows:

Line.	Year.	Line.	Year.
Sandaker-Røkenviken	1900	Hell-Sunde	1904
The north lines	1902	Bergen's line.....	1907
The Ofot lines.....	1902	Arendal-Amli.....	1907
Ekersund-Flekkefjord	1903	Part of this line.....	1903
Bergen-Gulsvik (the northern part of Kröderen).....	1904	Extension of Solør line to Elverum.....	1907

In addition to the above, the following plans for construction have been submitted for investigation and consideration by the department:

Trunk lines to Christiansand, Kongsberg (or Skollenberg), Honefas, Gjøvik, Sell, Stören, Drontheim, Grong, and Mosjøen;

side lines connecting these with the Romsdal and Sundal fjords and Namsos; and lastly, extension of the Bergen lines to Hardanger and Sognefjord.

It is easy to see that a large amount of the railroad supplies will shortly be needed here (to say nothing of the bridges which the nature of the country renders necessary), and it will pay our manufacturers to endeavor to obtain some of the contracts.

VICTOR E. NELSON,
Consul.

BERGEN, *March 25, 1899.*

BLOTTING PAPER IN THE NETHERLANDS.*

Blotting paper is manufactured in the Netherlands to a small extent, and the article is of a rather inferior quality. The quantity manufactured can not be ascertained, but is supposed to be insignificant.

Nearly all the blotting paper used here is imported—the larger part and the best qualities from England; inferior grades from Belgium, Germany, and France. Statistics of such importations do not exist, as all kinds of paper are booked together at the custom-houses, and dealers say it is impossible to give estimates, as most of the blotting paper is purchased direct by the retail stationery dealers from the factories abroad.

The stationery dealers do not seem to have any preference as to the shipping package. One of the principal dealers thought that American manufacturers would be the best judges as to the making of the packages.

The import duty on paper in the Netherlands is 5 per cent ad valorem.

There do not seem to be important dealers in my consular district who make a specialty of blotting paper. The principal importers of other kinds of paper do not seem to handle it. I have been informed by two prominent stationery dealers that Messrs. Van Gelder Sons, of Amsterdam, were the principal agents in the Netherlands of foreign blotting-paper manufacturers.

Principal dealers in stationery at Rotterdam are: Adr. Koller & van Os, 14 Open Rystuin; Canta Bros., Hoofdsteeg; M. Wyt & Sons, West Nieuwland; Wed. S. Benedictus, 82 Zuidblaak; J. P. Bladergroen, 153 Nieuwe Haven; Poot Bros., Opper.

S. LISTOE,
Consul.

ROTTERDAM, *March 10, 1899.*

* This report is in answer to inquiries by the National Association of Manufacturers, to whom Advance Sheets have been sent.

BRITISH SHIPPING AND SHIPBUILDING.

In 1898, Liverpool led all other foreign ports in the world in clearances for the United States, the number being 1,009. In addition, there were 14 clearances through the American consulate at Liverpool for ports that had recently been transferred from the jurisdiction of Spain to that of the United States. Of all these 1,023 clearances, only 3 of the ships carried the American flag—2 of them being sailing vessels. There were 275 of these clearances in ballast. But few of the ships which cleared here for United States ports took out full cargoes; yet, the year's business for the shipping companies was undoubtedly a paying one, speaking generally. It is manifest, therefore, that most of the profitable voyages were those eastward.

The launching of the *Oceanic* in January restores Liverpool to its former position of being the home port of the largest ship in the world. It is generally understood in shipping circles here that before the *Oceanic* makes its first trip to New York, the keel will be laid of a still larger ship—and, indeed, the probabilities are that before long at least two vessels, one German and one British, both larger than the *Oceanic*, will be under construction. The Belfast yard which built the *Oceanic* has so many orders under way that no new contracts will be taken for completion under five or six years. The owners of the *Oceanic* do not make any claim to exceptional speed. Their aim, they say, has been to secure increased comfort and increased reliability as to time of arrival at port. There are those, however, who predict a surprise as to speed. The fact is not generally known that the *Oceanic* was largely built of American steel plates. The supplying of American plates to British shipbuilders has become a permanent trade.

While the Mersey shows a continual increase in shipping, the industry of shipbuilding on the river has been steadily declining for some years past, owing to the greater facilities on the Clyde, Wear, Tyne, Tees, etc.

The total mercantile-marine shipbuilding output of 1898 for the whole world is estimated at 1,893,000 tons; and Lloyd's returns show that of this total output, 1,367,570 tons gross were launched in the United Kingdom, the number of vessels being 761, of which only 17 were sailing vessels. In addition, last year there were 41 war ships launched in the United Kingdom, of 191,555 tons displacement. The total output of the United Kingdom for 1898 was therefore 802 vessels of 1,559,125 tons. Not counting war ships, there were at

the close of the year 584 vessels of 1,401,087 tons gross under construction in the United Kingdom. The corresponding figures at the close of 1897 were 505 vessels of 1,013,319 tons. Lloyd's returns give the addition of steam tonnage to British registry during 1898 as 1,111,768 tons gross; and of sailing tonnage, 29,053 tons; total, 1,140,821 tons. So large an addition to steam tonnage has not been recorded in any previous year. About 90 per cent of the tonnage added to the register consists of new vessels, not one of which was built abroad. The total tonnage transferred to foreigners during 1898 was 588,508 tons, far greater than during 1895, 1896, or 1897, when the transfers were exceptionally high. After allowing for losses, dismantling, transfers, etc., the net increase of tonnage in the British merchant marine during 1898 was 209,293 tons over 1897. There was, however, a net decrease of 99 vessels, the explanation being that, while there was an increase of 245 steamers, there was a decrease of 344 sailing vessels. Lloyd's gives the following as the vessels and tonnage on the mercantile-marine register of the United Kingdom on the 31st of December, 1898, approximately:

Description.	Vessels.	Gross tons.
Steam.....	8,835	10,816,310
Sailing.....	11,567	2,552,543
Total.....	20,402	13,368,853

Of the tonnage classed by Lloyd's in 1898, 98.4 per cent was built of steel and about 1.3 per cent of iron. Compared with steam, sailing tonnage decreased from 25 per cent of the total tonnage in 1891 to 2 per cent in 1898.

Large as was last year's business in shipbuilding in British yards, this year's is expected to be larger. Of the launchings last year, 1,131,000 tons were under Lloyd's survey; while early in January this year, there were 1,186,000 tons of vessels being constructed under Lloyd's survey.

Of the new orders, a number of the largest ships will be for the trans-Atlantic trade, with Liverpool as the British port. There are also a number of ambitious projects for the British-Canadian trade.

It is noteworthy that for the first time in British Government trade statistics, the value of ships built in the United Kingdom for foreign registry is included in the monthly total export figures of this year. The total increase of exports in January, 1899, over those in the same month of 1898 was \$5,418,900; and of this, \$2,649,623 express the value of ships built in British yards for foreign registry during January, 1899. February's increase of exports was \$8,459,107; and of this, \$996,455 was the value of British-built ships for foreign

registry. It is explained that these valuations refer only to new ships which have not been on the British register, and have been actually exported during the month, and that they do not include old ships transferred to foreign flags, or new ships built or sold to foreigners during the month and not yet delivered.

In January this year, the Liverpool Daily Post stated that a company had been formed at Middlesbrough with a capital of \$1,458,000 to make steel ship plates by a new and cheaper process than the present method. The steel is to be made from Cleveland (north of England) pig iron, instead of hematite.

In a recent review of the shipbuilding boom of 1898, the London Times said:

One of the special causes that have contributed to bring about a large demand for shipping during recent years has been the greater economy of tonnage, due to the substitution of steel for iron. * * * Another source of economy has been the increased use of larger plates. * * * Then, again, the use of steel has given to the steel-ship owner a vessel of greater carrying capacity for the same nominal tonnage. * * * At the present time, more than 1,350,000 tons of steel shipping are under construction, against less than 9,000 tons in iron; but there are still many iron ships in our merchant navy, and the amount of new shipbuilding is likely to be heavy until they have been wholly displaced, and until the most modern engines and boilers have superseded the more wasteful systems of an earlier date.

The Times then goes on to say:

The extraordinary boom in our shipbuilding industry has caused a condition of affairs in relation to all our great mechanical industries that is almost without parallel. That shipbuilders themselves are full of work may be taken for granted, since they have nearly, if not quite, 500,000 tons more of actual business on their books than they have ever had before. But this large volume of orders does not mean activity in our shipyards alone. It involves a corresponding amount of pressure on marine and mechanical engineers, electrical contractors and engineers, iron and steel manufacturers, and the makers of the hundred and one different articles of greater or less importance that go to make up the equipment of the average ship. The value of the work which our mercantile shipbuilding industry alone has furnished this year to the engineering industries generally, including electrical engineers, will certainly not be less than five and a half millions sterling, while the current value of the orders placed with our iron and steel manufacturers from the same source is likely to be at least five millions. The total value of the mercantile shipbuilding completed during the year 1898 is likely to be quite twenty millions sterling, and the value of the shipbuilding for purposes of war on hand at the present moment for British and other navies, including guns and other equipment, will probably exceed twenty millions more. All this means a pressure on our great mechanical industries from home demands that has led to the enforced rejection of much foreign work and, to that extent, has been unfortunate as regards our export trade.

These remarks of the Times are in line with an argument being now generally advanced in England, that all comparisons as to the condition of trade here should take into account the enormous shipping and shipbuilding interests of the country. Unquestionably,

one reason why the British people are not so much exercised over the decrease in total exportations as might be naturally assumed is the fact of the great prosperity of their shipbuilding trade. If it had not been for the prolonged strike of the engineers (machinists), the turn-out of the British shipyards last year would have been much greater than it was.

British shipowners and shipbuilders confessedly view with some alarm the ever-increasing competition of Germany, and some concern is also expressed as to the conceded coming competition with the United States. Competition among the British steam owners themselves is also getting keener all the time. Although freight rates are not as high as they formerly were, yet, owing to the much larger dead weight which steamers can carry and the decreased cost of building, there is still profit to British shipowners in carrying the world's commerce. Some shipowners say, however, that the cost of building was much greater in 1898 than in 1897. According to Lord Inverclyde, president of the Cunard Company and of the chamber of shipping of the United Kingdom, the gross earnings of steamers were formerly \$72.99 per ton; now, they are about \$58.39 per ton. He also says that in 1898, the cost of cargo steamers was between \$29.19 and \$34.06 per ton of dead weight carried.

The subjects of special interest in connection with the British mercantile marine are now being widely discussed. The first is the displacement of British seamen on British ships by aliens, and the second is that of Government encouragement to the carrying of boys who shall undertake to qualify themselves for the royal navy reserve.

It is generally conceded that, next to seamen of the United States, British seamen get higher wages and better fare and more comfortable conditions of employment than do seamen of any other country. It naturally follows that alien seamen, as a rule, have a liking for service on British ships. Many shipowners complain of certain characteristics of British seamen, although there is a proud admission of the skillful and heroic conduct of British seamen in emergencies. There is undoubtedly an increasing number of advocates of Government action in this matter—that is, of the adoption of a policy which would make it to the financial interest of British shipowners to employ British seamen, and particularly British masters and officers.

As to the second subject of discussion, there is a universal feeling on the part of shipowners that the encouragement offered by the Government for the employment of boys for the naval reserve is utterly inadequate. This encouragement is in the form of an abatement of one-fifth of the light dues, on certain terms, to those ships

which carry boys who undertake to qualify themselves for the royal navy reserve. A short time ago, Lord Inverclyde, speaking as president of the chamber of shipping of the United Kingdom, said that this provision was not only inadequate, but was "absurd," and "likely to prove a dead letter." It is said that this abatement of light dues would only amount to about \$5 per annum for each boy, while it would cost from \$80 to \$100 a year to keep each boy. Liverpool shipowners generally express their willingness to enter into some scheme with the Government, if more liberal terms be offered, under which boys will be taken and trained to seamanship with the ultimate object of their being navy-reserve men; and one of the largest firms in the Kingdom (Messrs. Elder, Dempster & Co.) has indeed, on its own initiative, formulated a plan, independent of any assistance from the Government, for taking several hundred of such boys.

It appears from an explanatory statement made in Parliament that the main object of the Government in formulating this scheme is to secure an increased supply of British seamen for the mercantile marine. The scale and regulations made under this act were issued on March 14 by the Admiralty and Board of Trade. They will come into effect April 1 and continue in force until March 31, 1905, and no longer, unless Parliament otherwise enact. The following statement of the scale and regulations and provisions of the section of the act is from the *London Standard* of March 15:

It is provided that an allowance equal to 20 per cent of the light dues paid in any one year in respect of any one vessel will be granted at the end of each financial year (during which the vessel must have been not less than nine months with articles of agreement running) to the then owner of that vessel, provided it carries on each voyage "boy sailors," according to the following scale: Under 500 tons net, 1 boy; 500 and under 1,000 tons net, 2 boys; 1,000 and under 2,000 tons net, 3 boys; and an additional boy for every 1,000 tons or portion of 1,000 tons net. Any vessel, no matter what its tonnage, carrying 6 boy sailors shall be entitled to the maximum allowance of 20 per cent of the light dues paid. In order that the allowance may be obtained, each boy sailor must be a British subject (not being a Lascar), able to speak and understand English; be enrolled in a special class of the naval reserve, to be called the "probationer" class, and undertake to join the "seaman" class reserve under the reserve volunteer force act, 1859, as soon as qualified. The boy must be over 15 and under 18 years of age at the time of first enrollment, and be a deck hand. Boys enrolled in this special class will not be liable to be "called out." They will not be called upon to attend drill until they have passed into the seaman-class reserve, and will not be paid retainers or receive uniform. Probationers will be eligible for advancement to the seaman class when they reach the age of 18 years, provided they have followed a seafaring life for two years. The advantages offered are as follows: (1) Each man enrolled in the seaman class will receive £3 5s. (\$15.82) a year as a retainer, two suits of clothes during his five years' engagement, and whilst on drill 2s. 9d. (67 cents) a day, drill pay, and allowances. As soon as he has performed twenty-eight days' drill, he will, if favorably reported upon, be allowed to commence six months' naval training, upon the satisfactory completion of which he will be advanced to the "qualified-seaman" class at

the age of 20, provided he has passed the necessary examinations. He will then receive £6 (\$29.20) a year as a retainer, a suit of clothes every five years, and whilst on drill 3s. 1d. (75 cents) a day, drill pay, and allowances. He will also, provided he undergoes a further period of six months' naval training, and subject to the due performance of his duties as a member of the reserve, be granted a deferred pension certificate on completing his last term of drill, which will entitle him to a pension of £12 (\$58.40) a year at the age of 60, or previously if incapacitated. No allowance will be granted in respect of any boy sailor over 19 years of age, or for a longer period than three years from the date of the first enrollment of such boy sailor.

There are four training ships in the Mersey opposite Liverpool—three for boys (two of them being reformatory), to train them as seamen for the mercantile marine, and one, the *Conway*, for gentlemen's sons, to qualify them to be officers in the same service.

There is now in progress in several British law courts (including Liverpool) a very interesting question as to supplying seamen to foreign ships. Until quite recently, foreign ships were held to be exempt from the British merchant shipping act of 1894, which provided that every person who engaged or supplied a seaman or apprentice to be entered on board of any ship in the United Kingdom must be licensed to do so by the Government Board of Trade, or that it must be done by the owner, master, or mate of the ship, or the owner's servant and representative. Nothing is said in the act as to the nationality of the ship or the seamen. The practice at Liverpool and other ports of Great Britain has been for crews to be engaged by shipping masters of the same nationality as the ship, without reference to the conditions above referred to in the merchant shipping act. Thus, when a ship flying the American flag came to Liverpool, its outward crew was engaged by a shipping master claiming to be an American citizen, but who was not licensed by the Government Board of Trade. Some months ago, the Board of Trade brought action against a Norwegian shipping master at Liverpool on the grounds stated. The defense was that the merchant shipping act only applied to British vessels. The local court decided against the shipping master, holding that the act applied to all ships, irrespective of nationality, that cleared from British ports. An appeal was taken, but was dismissed on a technicality. At about the same time, a similar case came before the judiciary appeal court of Edinburgh. In this case, however, judgment had been given in the lower court in favor of the shipping master, but the judiciary appeal court reversed the decision and held, as did the Liverpool court, that the merchant shipping act applied to all vessels, irrespective of nationality, clearing from a British port. This position is now accepted generally as the correct interpretation of the law, and I believe it meets with approval as operating against the evils of "crimping."

The following are the British-reserve merchant cruisers and the subsidies they receive from the British Government:

Company and vessel.	Amount.	
Cunard Line:		
Campania.....	£7,500	\$36,498.75
Lucania.....	7,500	36,498.75
Peninsular and Oriental Company:		
Himalaya.....	3,375	16,424.44
Australia.....	3,375	16,424.44
Victoria.....	2,438	11,864.52
Arcadia.....	2,438	11,864.52
White Star Line:		
Teutonic.....	7,265	35,355.13
Majestic.....	7,396	35,992.63
Canadian Pacific Company:		
Empress of India.....	7,313	35,588.72
Empress of China.....		
Empress of Japan.....		
Total.....	48,600	236,511.90

LIVERPOOL, *March 21, 1899.*

JAMES BOYLE,
Consul.

PROPOSED DEPARTMENT OF COMMERCE IN GREAT BRITAIN.

Under date of March 22, 1899, Consul Marshal Halstead, of Birmingham, says:

Mr. Ritchie, the president of the Board of Trade, in his speech at the dinner in London of the Associated Chambers of Commerce on March 15, announced the purpose of establishing a commercial department in Great Britain. He said that in many ways governments were moving in commercial matters in which not very long ago they never attempted to move at all, and that in this year's Government estimates there was a sum of money for the establishment, under the auspices of the Board of Trade, of a new Government department, in which would be collected and focused all the information which now exists in the various departments, so that any commercial man may be able to go to the office and obtain intelligence in a business-like way.

This department is to be conducted by a committee which will be drawn from the India Office, the Foreign Office, and the Colonial Office, and will have added to it certain commercial men. In addition to that, there will be another sum of £2,000 (\$9,733) upon the Foreign Office estimate for obtaining, by means of specially appointed persons, special commercial intelligence abroad. We also intend to publish the Board of Trade Journal weekly instead of monthly.

Mr. Halstead also sends the following clipping from *Industries and Iron* in its edition of March 17:

We are rejoiced to see that at last a reform, whose pressing necessity we have repeatedly urged in these columns, may be regarded as a fait accompli. We are now authoritatively informed that the preparation and publication of the consular reports will pass from the control of the Foreign Office to a specially created department of the Board of Trade. We have repeatedly suggested this and given our reasons in detail for the desirability of the change. The Government has evidently the intention of copying to the fullest degree—and perhaps of improving on, if that be possible—the example set this country by the United States. Accepting this as the fact, there are one or two considerations connected with consular reports which we would desire to emphasize. They should be issued free to the chief organs of the general and technical press. We are, of course, far from suggesting that financial considerations have anything to do with the matter so far as the press is concerned. But it is quite evident that the matter comprised in the reports is of general importance, and it should therefore be given the widest publicity possible. Therefore, the trouble of sending and paying for the reports as they appear should be obviated. Their length and the frequency of their publication should be carefully apportioned in a relative degree to the interests involved. There is no doubt that a part of them should be telegraphic, and be published day by day. Lastly, the preparation of the reports should be placed in the hands of competent men of the highest commercial training and experience, and should be edited before publication by someone qualified to criticise them and capable of guiding and instructing their authors. We do not profess ourselves as exactly sanguine as to the entire accomplishment of the programme indicated by these premises; but if we get something even approximating to it, we shall have cause for gratitude.

The consul adds:

The best is not good enough for the United States, and in that sense the agitation at home for an improvement of our consular service is useful; but it is only fair that the standing of the service abroad should be understood and appreciated. The above editorial from an important British trade paper shows that there has been a long-time agitation here for consular reform, and that the United States service is the model.

Under date of March 24, Mr. Halstead sends a clipping from the *London Times* of even date showing the important work being done by the Austrian Export Association, as follows:

AUSTRIAN EXPORT TRADE.

[From our own correspondent.]

VIENNA, *March 23.*

The annual report of the Austrian Export Association, which has just been issued, manifests a satisfaction with the commercial policy of the Government which has hitherto been conspicuous by its absence among the trading classes of this country. The recent action of the Ministry of Commerce for the promotion of Austrian export trade, by the establishment of subsidized agencies abroad, is greeted with warm appreciation. It is regarded as a solution of the problem of securing a footing for the Austrian exporter in foreign countries. The report also gives particulars

of commercial missions dispatched by the association last year to Mexico, Uskub, Durban, Cape Town, and Perth, in western Australia, and announces the establishment, a short time hence, of an agency at Irkutsk, in Siberia. Another feature of this society's activity during the past year was an inquiry conducted privately among the representatives of all branches of Austrian industry respecting the possible consequences of a failure to renew the Ausgleich with Hungary. The result of the investigation, which has not been made public, has been submitted to the Ministry of Commerce in the form of a memorial.

BROOM HANDLES IN GREAT BRITAIN.

In a report printed in CONSULAR REPORTS No. 223 (April, 1899), p. 703, I stated that there was a great demand for and inability to procure American broom handles here, and that I would like to know why there should be that scarcity. Under date of March 10, I have received the desired explanation, very graciously volunteered by a gentleman in the United States, who evidently is thoroughly well posted, and his letter contains so much that is of interest that I give it below. He says:

I have been in the past a very large handler of American broom handles. I have shipped a great many thousands—yes, hundreds of thousands—to England during the last fifteen or eighteen years, but have not done very much for the last six or eight years, for the reason that they can not be sold in England at a price that will yield any profit to either the manufacturer or shipper. The broom handle that the trade wants in England is not what is known as a broom handle in this country. The English broom handle is used for a floor brush and must be 42 inches long, $1\frac{1}{4}$ inches in diameter, and the same size at both ends. An American broom handle is 38 inches long, seven-eighths of an inch in diameter at one end, tapering to three-fourths of an inch at the other. You will find by figuring it out that the English broom handle takes, including the saw calf for cutting it out of the lumber, a blank that is $1\frac{1}{4}$ inches square and 42 inches in length, which, figured out in the board measure, is about six-tenths of a square foot, and this is figuring very closely. When you understand the fact that the English merchants expect, or rather want, to buy the English style of broom handles at about from \$15 to \$18 per thousand f. o. b. steamer and made of white spruce, and that the lumber from which these handles have to be cut is worth from \$23 to \$24 per 1,000 feet in the boards, you can at once see that the handles will not bring as much money all turned and delivered to the vessel as the boards themselves would bring at the mill.

Another reason why the handles are scarce is the fact that the English people will insist upon having nothing but white spruce, whereas the broom handles that are used in this country are either birch or basswood. I have tried very hard in my experience to introduce the American basswood handle into England, but they simply won't have it. Therefore, the high price of the spruce in this country and the fact that it is growing scarcer and scarcer every year is the reason why there is an insufficient supply of broom handles in England.

In the same mail which brought the New York explanation, I received from an American in Hamburg, who is doing business there

as an agent for a United States manufacturer, a letter in which the following paragraph occurs:

The reason why broomsticks are so scarce is probably this, that there has been an unexpected boom in brooms in the United States. The price has gone up 25 per cent within a few months, which is quite unusual for such a staple article, and my manufacturers are in consequence four or five months behind in their deliveries. Another reason is that for broom handles, long, straight spruce or basswood sticks are required, and they must be well seasoned in order not to crack. The boom has unquestionably taxed the manufacturers to the utmost, and their kilns are no doubt full and can not be emptied before the wood is thoroughly seasoned.

Some months ago, I met in London an American citizen of Swedish nativity, whose relatives in Sweden have for many years derived their income by the sale of spruce timber from their lands, and he told me they wrote him that not only was spruce almost exhausted in their neighborhood, but pretty generally throughout Sweden and Norway. I have presented these facts to the manufacturer of brushes here who made the inquiry for broom handles, and I am anticipating that, as he must see in the near future it will be necessary for broom manufacturers to abandon the use of spruce, he will consent now to make an experimental use of basswood.

MARSHAL HALSTEAD,

BIRMINGHAM, *March 23, 1899.*

Consul.

ALKALI TRADE IN GREAT BRITAIN.

The following extract from the London Times of February 18, 1899, illustrates the actual effects of the United States tariff upon a very large British industry:

UNITED ALKALI COMPANY (LIMITED).

The eighth annual meeting was held yesterday in Liverpool. The report showed a net profit of £198,262 (\$964,842), which, added to £22,188 (\$108,977) brought forward, gave an available balance of £220,451 (\$1,073,819). In moving the adoption of the report, the chairman said it would be recollected that at the last annual meeting, he called attention to the high tariff imposed on their goods exported to the United States and to most European countries. The new scale of American duties had only been in operation about five months of the year then under review. In the past year, they had to face those duties during the whole year, and their important trade with the United States in alkalies had been reduced to very small proportions, compared with what it was before those heavy duties were imposed. In 1895, for instance, the total export of soda ash from this country to the United States was 125,698 tons, and in 1898 it fell to 29,323 tons. Of caustic soda, in 1895, the export to the United States was 33,625 tons, and in 1898 it fell to 11,171 tons. Thus, the British manufacturer had been practically shut out for the benefit of the American manufacturer, who had largely increased his production, and was not only able to meet his own country's requirements, but had a surplus for export.

And they had to meet the same state of things all over Europe, a tax more or less severe being imposed on the British-made article. They would understand very clearly what hampered their trade. In the important trade of bleaching powder, they had not only those high duties to face, but opposition provided for their special benefit. He mentioned last year that a syndicate of German manufacturers had bought up the whole production of over three years of the bleaching powder made by an electrical process in this country, at a fixed price, and was offering it in the home market very much below what they had given for it, for the express purpose, as they phrased it, of "keeping us in order;" in other words, to induce that company by a system of reprisals to keep their goods out of the continental markets. It might have been thought that the heavy duties on British goods would have been ample protection to the continental manufacturer.

The transaction of the German syndicate, which had still eighteen months to run, had reduced the selling price of bleaching powder by 20s. to 30s. (\$4.86 to \$7.29) per ton, and had, in fact, cost the Alkali Company a sum sufficient to pay ordinary shareholders a moderate dividend on their holding. The falling off in their trade had been attributed in some quarters to working with obsolete plant and not keeping pace with modern improvements, while the technical training of the heads and officials of the English chemical industry was defective as compared with those of other countries. Those were not the causes operating adversely, at least so far as that company was concerned. The true causes were those he had stated. With reasonable duties and fair play, they could hold their own, and hold it well. He made bold to say that their costs of production would compare favorably with those of other manufacturers—English, continental, or American—but costs could not possibly be reduced sufficiently to make up for a duty of £11 13s. 4d. per ton on an article which sold at about £30 per ton; yet, that was what the American tariff required them to do. Hence, the only way to retain the trade was to have an interest in manufacturing in the protected country. That they had done. A company had been formed and located at Bay City, in the State of Michigan, called the North American Chemical Company, in which they had a controlling interest. Those works, primarily established for the manufacture of chlorate of potash by electrolysis, began operations about November; and though not yet working at full capacity, turned out an excellent article at a cost quite within expectations, and promised to prove a very satisfactory investment. Having started so late, they did not contribute to the profit side of the present balance sheet. * * * They were advised that day by cable that the whole plant at the Bay City work was now running.

S. C. MCFARLAND,
Consul.

NOTTINGHAM, *March 22, 1899.*

IMPORTATION OF DOGS INTO GREAT BRITAIN.

The following note, dated Washington, March 28, 1899, has been received from the British ambassador:

SIR: With reference to my note of the 29th of May, 1897,* I now have the honor to forward to you a copy of a further memorandum issued by the board of agriculture on the subject of the importation of dogs into Great Britain.

In communicating this memorandum to you, I am directed by Her Majesty's Principal Secretary of State for Foreign Affairs to ask you if, in view of the fact

* See CONSULAR REPORTS No. 203 (August, 1897), p. 583.

that the regulations embodied in the memorandum 'n question are formed with a view to stamping out rabies in Great Britain, you would be so good as to cause them to be generally known to all persons concerned.

I have, etc.,

JULIAN PAUNCEFOTE.

Hon. JOHN HAY, etc.

The memorandum states that the importation of dogs without license is forbidden. Application for license must be made to the secretary, Board of Agriculture, 4 Whitehall place, London, S. W., in time to permit the board to inquire into the circumstances of the application, etc., before the embarkation of the dog takes place. Dogs will be detained for six months, under supervision of the authorities, on some suitable private premises specified by the owners. If the conditions imposed are properly carried out, the board will consider applications, accompanied by the certificates of veterinary surgeons that the dogs are not suspected of rabies, for their release after ninety days. Dogs whose antecedents are unknown will be subjected to longer periods of detention. In exceptional cases, the board will entertain applications made by telegram, on condition that a full description of the dog be given and the place in which he is to be detained specified.

For the convenience of persons passing through Great Britain, the board in special cases will authorize the landing of dogs which are to be exported in a few days. In making application for such license, the ports, names of the vessels, and dates of arrival and departure must be specified, and the address of some suitable place where the dog can be detained during the period it remains in Great Britain, which must not exceed ten days.

NEW CRUISERS IN GREAT BRITAIN.

I recently paid a visit to Her Majesty's dockyards at Pembroke Dock, and by the courtesy of the chief construction engineer was conducted through all the machine shops, saw the near completion of the royal yacht, soon to be launched, and the armored cruiser in process of building. Two thousand four hundred men are engaged in these dockyards. Everything proceeds with the regularity of clockwork.

The royal yacht has been so frequently discussed that I shall confine my observations to the new cruiser in course of erection at Pembroke Dock, which is to have a displacement of 9,800 tons. A similar vessel is also to be built at Portsmouth and two other armored cruisers of the same displacement are to be erected by contract. These four vessels are officially represented as cruisers Nos. 1,

2, 3, and 4. Their main features will be identical. The dimensions of the new Pembroke cruiser, I understand, are to be as follows: Length, 440 feet; breadth, extreme, 66 feet; displacement, 9,800 tons; speed, with natural draft, 23 knots; indicated horsepower, 22,000; armament, fourteen 6-inch quick-firing guns, 4-inch turrets and 10-inch casemates, ten 12-pounder quick-firing guns, three 3-pounder quick-firing guns, and two torpedo tubes.

The 6-inch guns will be of the latest type and will be protected by armor 4 inches thick. Vertical side armor of the same thickness will be carried over a considerable portion of the length, with thinner armor on her bows. Strong protective decks will be associated with the side armor. The steel hulls will be unsheathed. A speed of 23 knots is to be maintained for eight hours consecutively, on contractors' trials. In smooth water, about 21 knots should be maintained for continuous steaming at sea. The coal-bunker capacity will be 2,500 tons, and 1,250 tons are to be carried on board at the speed trials. Sums of £23,000 and £63,450 (\$111,930 and \$308,779), respectively, are provided, to be expended for labor at Pembroke Dock on these two new vessels.

Sir E. J. Reed, formerly member of Parliament for Cardiff, undertakes to criticise the plan of the Government for the building of these new cruisers. He is a distinguished authority on such matters, being one of the foremost civil and nautical engineers in Great Britain. His attitude in this connection is regarded by many competent authorities as hypercritical. The difficulty, to Mr. Reed's mind, is that the cruisers are to be so small. A fast vessel, with next to no protection and two or three light guns, is all that is necessary for preying upon British commerce. The vessels sent out for the protection of that commerce and the pursuit and destruction of the enemy should be at least equal in speed and possess sufficient offensive and defensive power to overcome these small commerce destroyers. His object, therefore, is to urge the Admiralty not to cut down these vessels, the designs of which are not definitely settled, to such small dimensions and tonnage as to make them too feeble for their purpose.

DANIEL T. PHILLIPS,
Consul.

CARDIFF, *March 15, 1899*

THE UNITED STATES IN THE WORLD'S MARKETS.

Under the above title, the organ of the Industrial Union, one of the most powerful organizations of the German Empire, has just published an article as interesting to American merchants and manufacturers as to those of the Fatherland. I may add, by way of parenthesis, that the Industrial Union exercises an enormous influence all over the Empire, gathering statistics, preparing data, giving counsel when trade treaties with foreign countries are under consideration, etc. The article begins by calling attention to the wonderful work being done by the United States to win first place in the world's markets. It says, in part:

The United States is essentially ahead; it is only in the total of imports and exports that we show greater returns. Its exports are ahead of ours. In the last fiscal year (June 30, 1898), the exports of manufactures reached \$290,000,000; and, although agricultural products, as usual, were well represented, the increase in the exports of manufactured articles was considerable and comparatively greater.

The increase in iron and steel literally borders on the marvelous. In thirty years, the value of these exports has gone up tenfold. The increase in the exports of copper wares is, comparatively, still greater. The exports of leather and leather goods more than doubled in the last ten years. Cottons have gone up slowly; only 50 per cent in twenty years. Bicycles, the exports of which began only ten years ago, now almost equal the exports of agricultural implements, which, in thirty years, increased upwards of tenfold, and in the last ten years threefold. The falling off in the sugar exports is not to be put down to a decline in the American industry, but to artificial aids in the form of premiums, which increase the European export. The increase in quantities exported is greater than the increase in values, since prices have constantly fallen during the last thirty years. The exports in mineral oils show a gain of 150 per cent in value, but of 1,000 per cent in quantity. This is doubtless true—perhaps not in the same percentage—of other articles. The showing is full of stuff for earnest thought for Germans.

In the growth of American exports, Europe will see itself forced to competition never counted on before in its widest calculations. With Nicaragua's canal cut, with cotton mills turning off cheap cloths beside the plantations in the South, with iron and steel works in Alabama, Pennsylvania, Ohio, etc., alongside the coal mines, with our wonderful natural water ways improved, there is no reason why we should not go on in the twentieth century as we have during the last two or three decades of the nineteenth.

CHEMNITZ, *February 23, 1899.*

J. C. MONAGHAN,
Consul.

EMIGRATION FROM GERMAN SEAPORTS IN 1898.

The imperial German commissioner's reports upon emigration in 1898, just published, have a particular interest for our country, in the first place, because they show that the bulk of the German emigration is in the direction of the United States; and second, because they recognize the enormous development of American industry during the last two years.

In 1898, 100,978 persons emigrated from German ports, viz, 60,486 from Bremen, 39,882 from Hamburg, and 610 from Stettin. Of these emigrants from German ports, 17,173 were from the German Empire, viz, 8,826 via Bremen, 8,170 via Hamburg, and 177 via Stettin. The greater part—83,805—were of other nationalities, among whom 38,493 were from Austria-Hungary, 27,853 from Russia, and 14,600 from the United States. The latter were, of course, by far the greater part Americans on their way back home, who, though carried by emigrant ships, did not belong to the class of emigrants. From Roumania, 855 persons came; from Denmark, 276; from other European states there were still fewer. The principal goal of all emigrants is, as always, the United States. To that country went 88,548; to British America, 4,698; to the Argentine Republic, 2,521; to Brazil, 1,713; to Africa, 1,886; to Australia, 674; to Asia, 302; to Chile, 191; and to the West Indies, 115. Emigration from German ports has, upon the whole, increased a little in 1898. The gain is, however, only in the number of non-German emigrants.

The imperial commissioner at Bremen says, in his report:

The strong tendency towards the United States, in spite of immigration having been rendered more difficult, finds an explanation in the fact that American industry has largely developed in consequence of the Dingley tariff, and that the demand for experienced artisans has therefore greatly increased. Moreover, German manufacturers have, in order to save the customs duties, established branch houses of their works in the United States.

As shown by the statistics, the artisans emigrating have increased in number from 9 per cent in 1897 to 15 per cent in 1898. Notwithstanding the increase in this category of emigrants, the general emigration of Germans to our country has grown less from year to year, and has gone down last year against the year before by 733 persons, a fact which is no doubt due to the prosperous condition of commerce and industry in the German Empire. The emigration of German agriculturists was as limited in 1898 as it had been in 1897. The greater part of emigrants was composed of Russians,

Poles, Hungarians, Croats, and Slovacs; also, Jews living in these nations. The emigration to Africa, particularly to the Transvaal and Cape Colony, numbered 447 persons in 1898, being about the same as the year before.

Only a small fraction of emigrants took their way in 1898, as well as in former years, to the German colonies in Africa, and the efforts of the Hanseatic Colonization Association, formed in order to promote German emigration to Santa Catherina in South Brazil, have also, so far, been attended with very scant success.

LOUIS STERN,
Commercial Agent.

BAMBERG, *February 28, 1899.*

COMMERCIAL EDUCATION IN ANTWERP.

Consul-General Lincoln sends from Antwerp, February 25, 1899, an article taken from the Belgian Times and News of even date, giving an account of the higher commercial institute of that city, which is summarized as follows:

The students are divided into two classes—the “regular” and the “free.” The former attend all the lectures with a view to obtaining a diploma at the end of two years, which period constitutes the prescribed course of study, except for those preparing for the Belgian consular service, for whom a third year’s course has been added. The “free” student follows only the courses of lectures which he considers of importance to his commercial career.

The instruction is practical as well as theoretical. The transactions of commercial and counting houses are practiced, and all questions relating to the theory of exchanges are accurately described. The correspondence of the “office” must be conducted by the student himself, and that, too, in French, German, and English, which languages are obligatory. He must also be competent to correspond in one other foreign language, the choice generally being from the Spanish, Italian, or Dutch. The Russian language is also taught; its study is not obligatory. The principles of political economy, of international commercial law, and of customs legislation are also inculcated. The geographical and economical condition of foreign countries are studied from carefully compiled data, and the relative value of raw material, from different sources of supply, is inquired into and noted.

The student is also encouraged to take a close interest in the political events of the day, so far as these affect commercial interests; and the latest consular reports from all countries are placed at his disposal, so that he later on may be in a position to make a report upon the commercial prospects of any country in which he may happen to be.

Another important feature of the Antwerp institute is the bestowal of traveling scholarships on the most deserving students of Belgian nationality. A sum of nearly £2,000 per annum is devoted to this object. A student who has passed his final examination with credit is entitled to offer himself as a candidate for one of these scholarships or “bourses,” as they are called. If one be granted, he proceeds abroad, with the certainty of enjoying, for three years at least, an annual income of about £200. He is thus relieved of the necessity of accepting the first situation that is offered to him and can devote the whole of his time, if necessary, to

the study of the economic condition of the country in which he resides. He must periodically send home a detailed report of the result of his observations. By his previous training, he is enabled to do this effectively; and these reports, after being noted by the Government, are utilized by the students in the prosecution of their studies.

Down to the end of 1892, 62 students had been thus sent abroad; the countries chosen for residence being Algeria, Morocco, the Cape, Japan, China, India, Canada, the United States, the Argentine Republic, Brazil, Colombia, Venezuela, Chile, Mexico, Cuba, Philippine Islands, Australia, and New Zealand—in fact, those countries in which Belgium is seeking to place her manufactures. Of these 62 students, 27 have remained in the countries to which they proceeded and are now doing well as merchants or commercial agents; 16 are established in European countries, also as merchants; and two have entered the service of the Japanese Government as teachers of the commercial sciences.

It will now probably be asked what is the cost to parents of a higher commercial education, such as that given at the institute at Antwerp. It is very small, the expenses of maintaining the establishment being borne by the Belgian Government in part and the rest by the Antwerp municipality. Each student pays a fee of about £10 the first year and £12 the second, the total amount thus raised being given as honorarium to the professors to supplement their salaries.

The Government does its best to procure a really competent teaching staff, and pays so much a year to each "chair," giving a pension to the professors after a certain number of years' service.

HAWAIIAN COMMERCE IN 1898.

A comparison of the annual report of the collector-general of customs of these islands for the year 1898 with that of last year is very interesting. An increase is shown in almost everything imported, and some of the gains are significant.

The decrease in the importation of gunpowder and firearms was undoubtedly caused by the islands becoming part of the United States.

Less fertilizer, by over \$94,000, was imported, though the consumption increased. This is accounted for by the fact that the local works manufactured more than ever before.

Light wines decreased in value \$18,666.81, due to the smaller importations of high-priced European wines. The consumption of California wines has increased 15,163 gallons during the year, the figures being 185,573, as against 170,410 last year.

The total receipts from customs were \$896,975.70, as against \$708,493.05, an increase of \$188,482.65.

It has been stated that the merchants here have been buying goods since annexation in anticipation of higher duties. By comparing the value of imports for the past seven years, it will be seen that the apparently large increase over the importations of 1897 is no greater in proportion than the increase of former years. I am surprised that the increase has not been greater.

Few persons who have not lived here can fully appreciate how much the general prosperity of these islands depends upon the sugar market. Excepting the transients, every one makes or loses according to the profits of the plantations. With annexation came a feeling of security of a market, and when you add to this an abnormally large crop with high prices, it is not surprising that new plantations should be promoted. These plantations are capitalized for amounts varying from \$1,000,000 to \$3,500,000, every cent of which will be expended before anything is received from the sale of sugar. A great part of this money goes towards the purchase of machinery and supplies. Of this money, I should say that 75 per cent is spent in the United States. In round numbers, probably \$25,000,000 is invested in sugar, practically all of which is owned here. The stock of these plantations is held by all classes. Every cent not needed in business goes into sugar. Those who bought sugar stock last August will be able to realize by August next 100 per cent profit on their investment. Does it seem likely, as a prominent merchant said to me the other day, that importers will tie their money up in merchandise they do not need, with a possible chance of making a profit of 20 per cent by the extension of our tariff, when they can make more by investing it in sugar stock? It must also be borne in mind that in this climate, there is great deterioration, and merchants do not dare carry too large a stock.

The following table shows the importations since 1892:

Year.	Value.	Increase.
1892	\$4,684,207.31	.....
1893	5,346,808.58	\$662,601.27
1894	5,713,181.43	366,372.85
1895	5,714,017.54	836.11
1896	7,164,561.40	1,450,543.86
1897	8,838,203.09	1,673,641.69
1898	11,651,890.81	2,813,687.72

The following shows the value of imports in 1898 from the countries named:

Country.	Value.	Increase.
United States.....	\$8,695,591.63	\$1,895,563.29
Great Britain.....	1,287,726.67	421,945.42
Germany.....	352,043.65	159,111.46
British colonies.....	481,768.01	300,639.90
China	328,851.87	68,434.47
Japan	354,324.98	62,008.64
France.....	43,655.55	12,658.23
Pacific islands.....	7,292.12	1,428.08
Other countries.....	99,636.33	* 114,965.81

* Decrease.

The large increase from the British colonies was coal, the greater part of which was imported by the United States for the use of the Army and Navy during the late war.

Of the imports, \$1,282,075.72 was specie of American mintage.

The percentage of vessels by nationalities was as follows:

	Per cent.
United States.....	60. 32
British	21. 17
German	4. 6
Hawaiian	13. 29
All others.....	0. 62

The exports for the year amounted to the total sum of \$17,346,-744.79, as against \$16,021,775.19 for 1897, an increase of \$1,324,969.60. The ports of Honolulu and Mahukona fell far behind 1897 exports; while Hilo and Kahului forged ahead.

The number of vessels to enter at the custom-house during the year (excepting transports, naval vessels, and coasters) was 481, against 427 for 1897, an increase of 54. Of this number, 209 were of American register. This is a falling off from the figures of American vessels for 1897, but is explained by the fact that a number of American steamers which made regular stops here were taken for transports last summer, and are not included in the above figures.

During the year 1898, 17,229 persons landed on the islands and 7,313 departed.

The arrivals and departures by nationalities were as follows:

Nationality.	Arrived.	Departed.
	Number.	Number.
Chinese	3,100	1,784
Japanese.....	9,434	2,193
Portuguese	80	172
All others.....	4,615	3,164

It will be seen by the above that the prosperity of these islands depends almost entirely upon its one great staple—sugar. Any cause which lowers the price of sugar will make everyone here poorer. By the annexation of Hawaii the United States gained territory with a population, if we except the Asiatics, as rich per capita as one will find in any place in the world. In their present prosperous condition, they are good customers of the mainland.

HONOLULU, *March 17, 1899.*

WM. HAYWOOD,
Late Consul-General.

OPENING FOR A STEAMSHIP LINE TO THE EAST.

During the year 1898, 153 ships left Marseilles for various ports in the United States, every one of which sailed under a foreign flag. This condition of affairs has continued for years, in spite of the extensive and rapidly increasing commercial intercourse between Marseilles and the United States; and, instead of finding American vessel owners interesting themselves in the trade, I discover, on the contrary, that a proposed French company intends to look to the United States for a large portion of its capital. It can not be supposed that our business men will definitely abandon the Mediterranean to foreign shipping, and it is my present purpose to call attention to an existing opportunity to create a successful American line which shall make Marseilles a port of call, while at the same time binding together New York and our oriental possessions.

Whatever may be the political future of the Philippines, it is impossible to conceive that we shall fail to establish there important commercial interests, and almost as impossible to believe that such interests can take permanent root and be properly developed, without the aid of an American steamship line operating from our Atlantic seaboard. The most convincing proof that such a line would pay its own way is the fact that the Messageries Maritimes, the Peninsular and Oriental, the Orient, and the British India companies all have regular and frequent sailings from Marseilles to the Far East. An American company would therefore have an equal opportunity for a trade of long standing, to which would be added the monopoly of the traffic between New York and Manila and a generous portion of the trade from New York to Marseilles, now controlled by two lines and irregular steamers plying between this port and the United States.

In support of these suggestions, it will occur at once that with extensive American interests in the Philippines, where we now have 50,000 troops in round numbers, a regular service of the first order would be a great public convenience. For tourists, the trip could be made attractive by a traffic arrangement permitting those who so desired to sail direct from New York to Liverpool, and thence by boat and train to Marseilles. This would permit spending a week or ten days in England and Europe and shorten the ocean voyage by the same length of time. During the Spanish occupation of the islands, the Transatlantica Company had regular sailings from Barcelona and secured the most of the European freight for Manila. Already, these sailings have been diminished in number, and freight

is seeking an outlet via Marseilles. This city is the natural point for breaking the long voyage, by reason of its advantageous position, its proximity to the Riviera, which would attract travelers who now take the German steamers to Genoa, and the opportunities for discharging and taking on freight.

To return to the traffic question more in detail, an American line would find in the Philippines 30,000 tons of copra, which must annually make its way to Marseilles. This quantity fell to 17,000 tons last year, but only because of political troubles. From Marseilles eastward, opportunity would be had for securing a portion of the endless variety of articles which seek India and the Orient generally. From Marseilles to New York, goods are exported annually to the value of from \$3,000,000 to \$4,000,000. From the United States to Marseilles, there would be 90,000 tons of cotton oil annually, wheat, staves, and a thousand staple articles which now enter this market.

The belief that such an enterprise must sooner or later be taken up has naturally followed as a result of investigation of methods of introducing American products into this consular district, and more especially American coal. The difficulty in the way has usually been the question of freight. Under favorable conditions, there is no reason why the United States should not be the controlling factor in the fuel and food supply, not only of the city of Marseilles, but of the whole Mediterranean region.

ROBERT P. SKINNER,
Consul.

MARSEILLES, *March 14, 1899.*

HEALTH OF MANILA.

I wish to refute the statements generally circulated in regard to the health and climate of the Philippine Islands. Being within the Tropics, they of course lack the invigorating effects of frost, and the temperature averages high—at Manila, about 78.3° F.; but extremes are not wide apart, and during the last year I heard of no temperature below 57° F. in the islands, and none below the sixties in Manila. Mercury in the shade rarely rises above 85°, nor above 95° in the sun.

Being on the coast of a bay so large as to be almost an inland sea, and having 8 miles to the east a lake with 100 miles of shore, whose waters seek the bay through the large and rapid Pasig, the city of Manila has fresh air constantly, as well as sea breezes.

The sewers of Manila are not good and can never be first class, because of its low level; but the rainfall here is above 10 feet per annum and quite evenly distributed, so that the streets are rain swept

and the sewers well flushed almost every day. There is also an advantage in hot, wet weather, which hastens the decay of vegetable or animal matter, this soon rotting and being washed away.

The city water supply is abundant. The water is carried in large iron pipes about 7 miles from springs, and is exceptionally pure and agreeable to taste. I use it every day as a beverage, and have never experienced ill effects therefrom. I have not been sick a minute since I left the United States in 1897.

In filthy quarters, smallpox may be found almost any day; but few deaths result, and the sanitary measures of the present government have been of benefit. The death rate is small, and it is only necessary to live properly to be entirely healthy.

O. F. WILLIAMS,

MANILA, *February 24, 1899.*

Consul.

MARKETS OF MANILA.

Mr. Oscar S. Williams, late United States consul, writes from Manila, February 17, 1899, that in response to numerous inquiries from United States manufacturers he has had a representative firm of importers (Messrs. Hollmann & Co.) prepare a statement and furnish samples,* showing the kinds of goods most in demand in the Philippines.

The statement is given below:

GENERAL REMARKS.

The low qualities of white shirtings, which have, up to this time, come from Spain, might well undergo a change in favor of better material and less finish. As the Spaniards paid no duty, they loaded their shirtings with quantities of starch. Now that all the goods have to pay the same rate, it will probably be found that the duty paid on finish may be saved, and goods of better quality, or at a cheaper price, furnished. Manila is a consumer of any quantity of fancy cotton articles.

There is, naturally, not much use for woollens in our warm climate, but there is a certain consumption of flannels, wool and half wool, woolen merinos, union cloth, light woolen trouserings, and similar articles. Some light black cloth and a good many scarlet woolen blankets are sold. In woolen as well as in silk goods, black is the favorite color.

There is a market for certain lines of linens and half linens.

Articles of great importance are iron, steel, galvanized iron, etc. These are referred to in detail farther on.

Provisions have already come from the United States to some extent, and need no special report. It is well known that the city is a large consumer of kerosene. The Russian article competes with the American.

Our commission for passing cottons through customs, storing, fire insurance, selling, remitting, etc., would be 11 per cent in full; landing, \$2† per case extra. For

* The samples have been sent, Mr. Williams says, direct to the Philadelphia Museums.

† Mexican currency. The value of the Mexican dollar, April 1, 1899, was estimated by the United States Director of the Mint at 47.2 cents.

other articles, special arrangements are made. In any case, our selling commission is not below $2\frac{1}{2}$ per cent nor above 5 per cent.

Terms of sale have been considerably shortened of late, and now cash payment on delivery or within a month's time against a cash discount of 5 to 7 per cent has been arranged.

Contracts for monthly shipments or as per special arrangement, with stipulated prices and exchange, can be procured as soon as the trial shipment turns out to the satisfaction of the buyers.

Well-known marks are worth a great deal in this country. Take, for instance, our mark, "cock in cage," for white drill. The same quality, the same size, or even wider, imported by other houses is paid for at the rate of \$8.50 a piece, which leaves a modest margin. We sell our brand at \$10, and dispose of 50 to 60 cases a month in Manila and 20 cases in Iloilo.

All the samples we send are also salable in Iloilo, sometimes in bigger and sometimes in smaller quantities. There are some fancy articles which are salable only in Iloilo, not in Manila; but they are not of importance. In general, Iloilo sells the same articles as Manila, and is a very important market. Some day, Manila may even be surpassed by Iloilo.

CURRENCY.

In old times, gold money was used here to such an extent that silver was at 10 per cent premium. Later, gold was exported, and in 1883 already $0\frac{1}{2}$ to $1\frac{1}{2}$ per cent premium was paid for it. When it was too late to keep gold here, the Government prohibited the importation of Mexicans, and in 1887 joined to that law a decree according to which only Mexicans dated before 1878 had legal value. So our currency consisted of Mexicans of older date than 1878, of Spanish Carolus and Spanish Fernando dollars* and a great quantity of half dollars.

The export of the Philippines has always been greater than the import; and therefore the tendency of exchange was to rise continually, and money became scarcer and scarcer. So it happened that, the import of Mexicans being forbidden and no other money produced, premium on Hongkong went up to 14 per cent and more. Then some large sums were smuggled in, and the premium went down again. During more than ten years, our money market was adjusted by smuggling Mexicans from Hongkong.

In 1897, the Spanish Government minted Philippine dollars in Spain, which contained about 10 per cent silver less than the Mexicans, and sent several millions here. The public had to take these dollars at full value. We believe that all these light dollars are still in the country. The half-dollar and 20-cent pieces which the Government minted never came to the full value of Mexican currency.

COTTONS.

The Philippines produce a good quantity of woven stuff. Probably, the greater part is made of imported cotton yarn, gray, white, and dyed; but there are also many thousands of pieces made of manila hemp, in ordinary and in fine qualities, the latter very often mixed with silk.

The principal places for the manufacture of cotton goods are the two provinces of Ilocos, in the north of Luzon, and for hemp, the provinces of Albay and Camarines. The Visayas provinces manufacture all the different woven stuffs.

Formerly, nearly all the cotton yarn came from England, with the exception of some Turkey-red yarn from Germany and Switzerland. The increase in duty would not have excluded the English yarn if it had not been for false numbering. Spain sends No. $\frac{3}{8}$, No. $\frac{7}{8}$, No. $\frac{1}{4}$, etc.—i. e., yarn No. 20 made up as No. 40, with a No. 40 ticket and 40 heads in a bundle, etc.

* No longer current in Spain, but legal here.

A bale of gray or white yarn contains 40 bundles of 10 pounds, and if No. 20 is made up in No. 40 the weight of each bundle will be about the same, but the length of thread much shorter. The false numbering has now been going on for three or four years. The natives must have found out that they cheat themselves in buying wrong-numbered yarn, but the system goes on and they accept it. Under these circumstances, it is very difficult to give quotations for true numbers, or an idea of prices. We give below quotations of the different yarn numbers used in this country. As no statistics exist, we only mention the number of bales we ourselves might easily dispose of in a month.

Number.	Bales.	Price per bale of 400 pounds.	
		Mexican.	U. S. cur- rency.*
<i>Gray twist.</i>			
6.....	10	\$145	\$68.44
10.....	10	150	70.80
12.....	5	155	73.16
16.....	5	160	75.52
20.....	10	170	80.24
24.....	15	185	87.32
30.....	30	200	94.40
32.....	15	205	96.76
40.....	20	225	106.20
50.....	10	245	115.64
60.....	5	255	120.36
<i>White (pearl) twist.</i>			
30.....	20	210	99.12
32.....	10	215	101.48
40.....	20	235	110.92
50.....	10	255	120.36
60.....	5	265	125.08

*Taking the value of the Mexican dollar April 1, 1899, as 47.2 cents.

There is also a limited inquiry for Egyptian yarn at higher prices.

In Turkey-red yarn, the same false numbering has taken place; whereas in dyed yarns, which never came from Spain, true numbers have always ruled.

In dyed yarns, only green and red orange are of importance; No. 22 is principally used.

Turkey-red yarn in a lively, not too dark, shade is asked for, as follows:

	Bales.
No. 20, 22, 24.....	20
No. 30.....	40
No. 40.....	20

Duty on yarn is:

Yarn, twisted in one or two threads, unbleached, bleached, or dyed, up to No. 35, inclusive, per kilogram (2.2046 pounds), 25 cents+20 per cent+10 per cent harbor duty and 8 per cent of 56 cents value duty.

The same, from No. 36 upwards, per kilogram, 35 cents+20 per cent+10 per cent harbor duty and 8 per cent of 80 cents value duty.

The same, twisted, with three or more threads, unbleached, bleached, or dyed, per kilogram, 50 cents+10 per cent harbor duty and 8 per cent of \$1.60 value duty.

Gray shirtings are a most important article; but since we have a factory here, it seems impossible to sell imported shirtings. Duty is:

Up to 25 threads (per 6 millimeters square), inclusive, per kilogram, 20 cents+20 per cent+10 per cent harbor duty and 8 per cent of 90 cents value duty.

Up to 35 threads, inclusive, per kilogram, 32 cents+20 per cent+10 per cent harbor duty and 8 per cent of \$1.10 value duty.

Gray drills will be manufactured here, and therefore do not offer a good opening for importation. The duty is:

Up to 25 threads (per 6 millimeters square), inclusive, per kilogram, 25 cents+10 per cent harbor duty, 8 per cent of \$1.35 value duty.

Up to 35 threads (per 6 millimeters square), inclusive, per kilogram, 40 cents+10 per cent harbor duty, 8 per cent of \$1.60 value duty.

Thirty-six threads and above, per kilogram, 55 cents+20 per cent+10 per cent harbor duty, 8 per cent of \$1.60 value duty.

Tissues, printed, twilled, and figured in the loom, pay the same duty.

White shirtings.—The most popular marks for many years have been our "Sunticket" and "casa oro." There is no stock on hand and therefore no prices to be fixed; but we are pretty sure that \$5 per piece would be paid to-day and if goods can not be laid down here much cheaper, these figures may be relied upon. A trial shipment of some 40 to 50 cases, each with 60 pieces "Sunticket," and 20 to 30 cases, each with 60 pieces "casa oro," would find a ready sale. These quantities, we calculate, would supply the monthly demand. These measure 40 varas (36 yards).

The Bailarina mark measures 36 varas (33 yards). Some 10 cases of Bailarina lately arrived and with full duty paid sold at \$5.75 per piece with 7 per cent discount cash down.

Of the Señorita mark measuring 40 yards, we used to sell 20 to 30 cases a month. No stock has been on hand for several months. To-day, probably \$5.87 to \$6 per piece might be obtained.

The English make, Rajah's head, measuring 33 inches in width and 40 yards in length, sells at \$6 to \$6.50 per piece. The monthly consumption is about 10 cases.

Diez+9, 37 inches wide and 40 yards in length, sells at \$7 to \$7.25 per piece; monthly sale, 10 cases of 50 pieces each.

"6040," 36 inches wide and 36 yards in length, sells at \$6 to \$6.25 per piece; monthly sale, 15 cases.

The two kinds, H2 and H7, are used here for dyeing. We sold last week 5 cases of H2 at \$4.375 per piece, and 5 cases of H7 at \$4.75 per piece.

There are any number of different marks in white shirtings. We ourselves have a great many more; but we consider that the principal types will serve to show the market.

There is also a limited demand for finer shirtings. The mark Housicket No. 3, width 33 inches, length 40 yards, sells at \$8.25 per piece; monthly sale, 10 cases each of 60 pieces.

The duty on shirtings is:

Up to 25 threads (per 6 millimeters square), inclusive, per kilogram,* 20 cents+20 per cent+10 per cent harbor duty, 8 per cent of 90 cents value duty.

Up to 35 threads (per 6 millimeters square), inclusive, per kilogram, 32 cents+20 per cent+10 per cent harbor duty, 8 per cent of \$1.10 per kilogram value duty.

Thirty-six threads and above, per kilogram, 44 cents+20 per cent+10 per cent harbor duty, 8 per cent of \$1.10 per kilogram value duty.

White drills.—Duty on this article is, per kilogram, 55 cents+20 per cent+10 per cent harbor duty, 8 per cent of \$1.60 per kilogram value duty.

* 2.2046 pounds.

Our "66" sells now at \$10 per piece; it measures 24 inches in width and 30 yards in length; monthly sale, 50 cases of 50 pieces each.

Other marks are sold at \$8.50 per piece. Other white drills of large consumption are our No. 2000, No. 3000, and No. 5000. Present selling price for No. 3000 is \$7.25; No. 2000, \$7.125; and No. 5000, \$7.375—per piece of 25 inches in width by 30 yards in length. In Manila and Iloilo, we sell some 30 cases of 50 pieces each per month.

An article which appears to have a great future is the brown-drill, known under the name of khakicloth. It is the stuff in which the English army in India is clad and, lately, the American army here.

Socks and stockings are of importance; so are undershirts (camisetas), in prices from \$3 to \$9 per dozen; more gray than white and more short sleeves than long ones are used.

IRON AND STEEL.

The duty on iron is \$2.60 per 100 kilograms+10 per cent and 8 per cent of \$4.40 per 100 kilograms.

On steel, \$2.60 per 100 kilograms gross weight+10 per cent and 8 per cent of \$4.40 per 100 kilograms.

On galvanized iron: Sheets, \$2.60 per 100 kilograms; ridgings, \$2.60 per 100 kilograms; screws, \$4 per 100 kilograms; washers, \$2.60 per 100 kilograms; rivets, \$1.80 per 100 kilograms—plus 10 per cent; and 8 per cent of \$11 per 100 kilograms sheets or ridgings, 8 per cent of \$10 per 100 kilograms screws or rivets, 8 per cent of \$5 per 100 kilograms washers.

The consumption of pig iron is not very large. It comes here only as ballast, paying no freight.

Of bar iron, we used to sell before the revolution about 1,000 piculs (137,500 pounds) per month. The best-known quality is Govan. To ascertain the whole consumption in these islands is impossible, as there exist no statistics. The present market price for the assortment described below is about \$7.75 per picul (137½ pounds), less 5 per cent cash discount.

Of more importance is galvanized iron. The unsatisfactory results of tilings when subjected to earthquakes have made it a general rule to cover the houses with galvanized iron. The present market price is \$9.50 per quintal (100 pounds), less 5 per cent cash discount. On each sheet the mark is to be painted. Our special mark, which no other house can carry, is six crowns painted in black in groups of three, one group directly below the other. The selling prices of the different marks vary between 12½ to 50 cents per quintal, according to mark, which always represents a certain quality.

The packing of the article is very important, because one has to allow a considerable rebate for goods stained by sea water, etc.

Nearly all the steel imported into this country comes in cases 3 feet long and weighing 68, 70, or 72 cattie, according to the wish of the buyer. One catty is 1½ English pounds. These square sticks, of something like 3-feet length, are of different thickness, and the usual assortment is 1,200 cases of seven-eighths of an inch, and 800 cases of three-fourths of an inch. The selling price per picul of 137½ English pounds is now \$9.62½, less 5 per cent cash discount. People here do not like soft steel, as it does not bend, but breaks if struck with a hard object.

Other metal articles of large consumption are tin-plate washers, wire nails, wire rope, zinc sheathing, yellow metal, etc.

We are ready to give any details on application.

DESCRIPTION OF BAR IRON AND MONTHLY CONSUMPTION.

Description.		Quantity.	
Flat:		Piculs.*	Pounds.
Length, $4\frac{1}{2}$ meters (14.8 feet)—			
2 by $\frac{3}{4}$ inches.....		30	4,125
2 by $\frac{1}{2}$ inches.....		100	13,750
$1\frac{1}{2}$ by $\frac{3}{4}$ inches.....		50	6,875
$1\frac{1}{2}$ by $\frac{1}{2}$ inches.....		30	4,125
$1\frac{1}{2}$ by $\frac{3}{8}$ inches.....		30	4,125
$1\frac{1}{2}$ by $\frac{1}{4}$ inches.....		30	4,125
$1\frac{1}{2}$ by $\frac{3}{16}$ inches.....		80	11,000
$1\frac{1}{2}$ by $\frac{1}{8}$ inches.....		80	11,000
1 by $\frac{3}{4}$ inches.....		40	6,875
1 by $\frac{1}{2}$ inches.....		40	6,875
Length, $3\frac{1}{2}$ meters (11.5 feet)—			
1 by $\frac{3}{4}$ inches.....		30	4,125
$\frac{1}{2}$ by $\frac{3}{4}$ inch.....		40	6,875
$\frac{1}{2}$ by $\frac{1}{2}$ inch.....		30	4,125
$\frac{1}{2}$ by $\frac{3}{8}$ inch.....		200	27,500
$\frac{1}{2}$ by $\frac{1}{4}$ inch.....		20	2,750
$\frac{1}{2}$ by $\frac{3}{16}$ inch.....		30	4,125
Total.....		860	118,250
Round (length, $4\frac{1}{2}$ meters):			
$1\frac{1}{2}$ inches.....		30	4,125
$1\frac{1}{2}$ inches.....		30	4,125
$1\frac{1}{2}$ inches.....		30	4,125
1 inch.....		30	4,125
$\frac{1}{2}$ inch.....		30	4,125
Total.....		150	20,625
Square:			
Length, $4\frac{1}{2}$ meters—			
$2\frac{1}{2}$ inches.....		30	4,125
$1\frac{1}{2}$ inches.....		30	4,125
Length, $3\frac{1}{2}$ meters—			
$\frac{3}{4}$ inch.....		40	6,875
$\frac{1}{2}$ inch.....		30	4,125
Total.....		130	19,250
Half round (length, $3\frac{1}{2}$ meters):			
$\frac{1}{2}$ inch.....		40	6,875
$\frac{1}{4}$ inch.....		20	2,750
Total.....		60	9,625
Cval (length, $3\frac{1}{2}$ meters):			
$\frac{1}{2}$ inch.....		30	4,125
$\frac{1}{4}$ inch.....		20	2,750
Total.....		50	6,875

* The Philippine picul is equal to 137½ pounds.

TRADE OF FORMOSA.*

The trade of Formosa has made great progress during the last few years, and the United States has a larger share than any other nation, with the exception of the mother country, China. In 1896, the total United States trade with the island amounted to 7,717,789 Japanese yen (\$3,858,897 in United States currency); and in 1897, out of a total foreign trade (excluding China) of about 11,000,000 yen (\$5,500,000), that portion falling to the United States amounted to 6,517,658 yen (\$3,258,829). The decrease in 1897 from the preceding year was due to an unfavorable tea season. Of these amounts, the export trade forms by far the greater portion; still, the import of American goods, compared with that of other nations, is considerable.

In 1894, the last year of the Chinese administration, our import trade amounted to about 165,000 yen (\$82,500). With the island under Japanese control, our imports reached in 1896 the value of 594,389 yen (\$297,194) and in 1897, 811,660 yen (\$405,330).

Unfortunately, no regular statistics are kept by the Japanese Government of goods arriving at the port of Kelung from the mainland, Japan, although that port has much shipping. Some American goods can be found in nearly all the numerous Japanese shops which have sprung up in the various cities of the island; but nearly all their stock arrives from Japan via Kelung, and this, together with American goods arriving from Hongkong, which are found in the customs statistics as Hongkong exports, renders it impossible to state figures as to the actual consumption of American products in the island. However, it is a safe estimate to place the total value of the same at over 1,000,000 yen (\$500,000).

The principal imports from the United States are: Petroleum, valued at 529,080 yen (\$264,540); flour, valued at 211,305 yen (\$105,652); and ginseng, valued at 51,437 yen (\$25,718). Other items appearing in the customs statistics are condensed milk, confectionery (biscuits; cakes, etc), shrimps, clocks, brass ware, blankets, piece goods, tobacco, cement, furniture, lamps, porcelain, and earthenware.

Among these items we find a decrease, as compared with the year 1896, in condensed milk, flour, clocks, and tobacco. The good quality of the Anglo-Swiss Condensed Milk Company's product, which is sold on this market for 25 sen (12½ cents in United States gold), has gradually driven all other brands out, and, although the Eagle brand is superior, the market price of the same—40 sen, or 20 cents in United States gold—is almost prohibitory.

* This report was made in reply to inquiries by the director of the Philadelphia Museums, to whom Advance Sheets have been sent.

Two brands of American unsweetened, so-called evaporated cream have been imported into the island and found much favor among a very limited number of consumers—foreigners and Japanese; but the Chinese and Japanese generally desire the sweetened milk, as more economical and possessed of better keeping qualities. If a brand of American condensed milk fully equal to the Anglo-Swiss could be placed on the market at a similar price, it would in time doubtless recover much of the trade which the United States once possessed in this commodity. The consumption of condensed milk in the island in 1897 reached some 23,000 dozen cans, valued at about 50,000 yen (\$25,000). Every year shows a rapid growth in the use of this commodity.

The decrease in flour is very slight, and due perhaps to the withdrawal of a considerable portion of the military forces after the occupation of the island. The demand is assuming larger proportions year by year, and with the arrival of increasing numbers of Japanese and the greater prosperity of the Chinese laboring classes, this import is quite likely to reach more important dimensions. The total import of American flour for 1897 amounted to 5,526,150 pounds, valued at 217,651 yen (\$108,825).

The decrease in American clocks is not a decrease in consumption, but is due rather to the transfer of the trade to Japan. The numerous Japanese merchants have taken the sale out of the hands of the Chinese and are now importing their supplies from Japan via Kelung, no record of their arrival being kept by the customs. American clocks and watches can be found among the stock of all dealers in such wares. The demand is for the cheapest class of these goods.

Tobacco, like milk, is rapidly falling into the hands of our competitors, but in this case it is due almost entirely to the method of packing.

The damp atmosphere of Formosa, like that of many other Eastern countries, is such that tobacco rapidly spoils if it is not put up in hermetically sealed tins. American cigarettes, of which there was at one time a considerable consumption, arrive in little pasteboard packets, the cigarettes protected by a wrapper of tin foil; and in a very short time—a matter of a few weeks only—they turn green and moldy and are practically worthless. Wills & Co., an English firm, pack their cigarettes, which are advertised as being made of American tobacco, in round tin cases holding fifty. By a clever arrangement, a small blade can be brought into position on the outer cover, and a “simple twist of the wrist” cuts a circular hole in the tin, and the contents of the package are before you as fresh and fragrant as the day they left the factory. The total import of foreign tobacco, excluding cigars, is valued at 111,432 yen (\$55,718), of which the United States has but 1,146 yen (\$573).

Tobacco is not the only American product lost to this market on account of inferior packing. The writer has seen United States oatmeal, buckwheat, raisins, cakes, biscuits, and other products of a like perishable nature arrive from the United States packed in the most flimsy, light pasteboard boxes and paper bags, intended, as at home, to be placed on the retailers' shelves; but after being, during a few weeks, subjected to the damp and to the attacks of insects, so numerous in the East, the package and contents have so deteriorated that the article is no longer salable. English oatmeal, cakes, and biscuits always come packed in air-tight tin boxes, and raisins and salt in glass. In fact, provisions from England of almost every kind arrive packed in either tin or glass, and, while the cost of the same may exceed that of goods packed as American provisions generally are, it is an expense that the Eastern importers will gladly meet.

Furthermore, where cans are used by the English, the whole package has been invariably treated to a coat of varnish, and sometimes paint. The result is the package always looks well, even after it has been on the shelves for months. Our canned goods have paper labels roughly pasted on, and, while at first very attractive in appearance, they soon become moldy and dirty, the wrappers loosened, and the tins covered with rust. I have seen American canned goods in Formosa that I knew had not been on the shelves for more than a month, yet had the appearance of shop-worn goods, years in age.

Two consignments of American bicycles have been received, and they were found very satisfactory, with the exception that the order, which called for a complete outfit—bell, lamp, brake, pump, etc., as these articles are not to be obtained here—was not filled, the machines being sent in one case without the bell and brake and in the other without pumps for inflating the tires. The result is that the latter machines must remain on the dealer's hands, losing in this climate much of their brightness, during the three months necessary to obtain the pumps from New York. In the first instance, the exporter wrote that the machines were not equipped with a brake because this was of no practical use and was sure to injure the tire.

The result was that two customers, for whom machines had been specially ordered, refused to accept them; and the native dealer, who had for the first time received a shipment from America, while able to dispose of the whole consignment, was considerably annoyed. The United States, so far as I can ascertain, is the only country where the brake is not generally used, and, at all events, for the East a bicycle is considered incomplete if it does not possess this attachment.

The Formosan Government is at present endeavoring to secure 10,000,000 yen (\$5,000,000) for harbor works at Kelung, 30,000,000 yen (\$15,000,000) for a railway through the island,* and 20,000,000 yen (\$10,000,000) for other public improvements. While the whole amount desired may not be obtained, it is quite likely that sufficient funds will be forthcoming to commence work on Kelung Harbor and on the railway. There will be dredgers, rails, locomotives, etc., to be purchased, and it is hoped that we may have a share in furnishing them. It is necessary to add here that large orders, such as for waterworks material and railway and harbor machinery, are generally given out in Tokyo, Japan, and not in Formosa, although it is well to have representatives here also.

In the ordinary lines of trade, excluding those in which the United States already has a share, the following imports are the most important from foreign nations, and it may be possible for the United States to obtain a hold in some of them: Leather (most of the Japanese use foreign style boots and shoes), buttons, glassware, nails, iron piping, ironware, iron bars, lead, cotton yarns, cotton prints, raw cotton, cotton thread, white shirtings, cotton satins, lastings, gray shirtings, dyed shirtings, woolen yarns, Spanish stripes, long ells, camlet, woolen cloths, woolen edgings, thread and twine, beer, cement, lumber, umbrellas, rubber goods, toilet articles, novelties, etc.

Inquiries are frequently made for information regarding American manufactures, and I would suggest that catalogues and price lists describing the same be sent to this consulate, where they can be placed on file and exhibited to interested parties calling. I would also suggest that a full line of samples of piece goods, with a description of quality, size, weight, cost, etc., be sent attached to each sample.

Formosa is an out-of-the-way place, and but little of the enterprise exhibited by foreign firms in China in introducing new goods is to be observed here. The class of piece goods arriving now is not very different from that which came into the island twenty-five years ago, and, while China has taken increasing quantities of American fabrics year by year, scarcely any have reached Formosa. The piece goods arriving from Europe amount to over \$500,000 a year in value, while from the United States the import is practically nil—a few yards of T cloth and a few hundred pair of blankets valued at \$1,000. I will give every assistance to American firms consistent with official regulations in building up our trade in the island.

JAMES W. DAVIDSON,

TAMSUI, *January 30, 1899.*

Consul.

* See CONSULAR REPORTS No. 224 (May, 1899), p. 67.

OPENINGS FOR AMERICAN TRADE IN FORMOSA.

The following is a copy of a letter by Consul Davidson, of Tamsui, dated March 13, 1899, to the Philadelphia Commercial Museum:*

A few days ago, the Imperial Japanese Diet passed the loan bill which gives to Formosa the sum of 35,000,000 yen (\$17,500,000 in United States gold) to be spent in public improvements in the island. This will undoubtedly result in an increased import trade, and it is to be hoped our manufacturers will profit by it. While the larger proportion of the above sum will be expended in railway and harbor work, trade in all lines will be stimulated, and a considerable commercial boom is to be expected during the period of construction.

A very important experiment is now being made, the success of which depends much upon assistance given by American manufacturers. I refer to the establishment in this city (Tamsui) of a general supply house, something entirely new to Formosa. Commodious quarters have been obtained, and a large sample room arranged, in which will be placed on exhibition manufactured goods of all kinds. The manager, Mr. H. W. S. Edmunds, is an experienced merchant from Japan, and he informs me it is his intention to push, almost wholly, the sale of American goods. He is desirous of entering into communication with American manufacturers, and has handed me the inclosed list of goods in which he thinks something may be done. He solicits from manufacturers catalogues and commercial literature, with prices and best discounts and other information necessary for effecting sales, and would like catalogues in duplicate wherever possible. He is particularly desirous of obtaining samples, and requests that same may be sent him wherever practicable. The sample room will, he believes, lead to more satisfactory results than any other method of business which he could adopt; and with this, I agree wholly. Of course, there are some lines in which samples are out of the question. For such, he desires photographs or other pictorial representation. The Edmunds establishment will be the only house working on this basis in the island, and, as both Japanese and Chinese like to see style of goods before ordering, I have great confidence in its ultimate success.

As to the advantage of manufacturers sending commercial literature to this consulate, I might state that catalogues which are loaned to inquirers frequently lead to sales. Requests for catalogues

* Advance Sheets have been sent the museum.

and information regarding certain American manufactures are often made, and, while they are mostly for single articles of machinery of no great value, still these are of importance in introducing to the island a large variety of goods which may lead to more profitable business later.

LIST OF GOODS REGARDING WHICH INFORMATION IS DESIRED.

- (1) Cheap paints of all kinds.
- (2) Good, cheap, durable lumber, suited for general building purposes, which will resist the damp and white ant.
- (3) Railway and bridge timbers and other railway and bridge material.
- (4) Light and portable railways (Decauville) and railway and bridge supplies of all kinds.
- (5) Building material and builders' hardware.
- (6) Cheap ceiling and roofing material.
- (7) Cheap dredging machinery and river-flushing machinery.
- (8) Cheap drain and ditch machinery; also road-making machinery.
- (9) Water pipes and water-pipe fittings.
- (10) Sheet, bar, and angle iron.
- (11) Best tool steel.
- (12) Malleable iron and steel castings.
- (13) Galvanized wire and wire rope.
- (14) Galvanized iron.
- (15) Hoisting engines and hoisting and hauling devices.
- (16) Pipe threading and cutting machines.
- (17) Insulated wires and cables.
- (18) Water wheels, motors, turbines, etc.
- (19) Electrical machinery, apparatus, and supplies.
- (20) Rope, binder twine, etc.
- (21) Files, axes, hammers, shovels, spades, scoops, etc.
- (22) Leather belting, cheap cement, glue, etc.
- (23) Coal-mining, coal-handling, and gold-washing machinery.
- (24) Derricks, cranes, and other unloading machinery.
- (25) Well-boring and prospecting machinery.
- (26) Cement machinery.
- (27) Salt machinery; also sulphur machinery.
- (28) Mining machinery.
- (29) Clay-working and brick machinery.
- (30) Sugar machinery, including mill, refinery, and distillery, and small mills worked by animal power, with details regarding a small plant capable of producing about 10 tons of raw sugar per day; also complete outfit for refining about the same quantity per day.
- (31) Cheap gang mill, vertical preferred, to cut boards 1 inch thick out of timbers 12 inches in diameter; also larger mills.
- (32) Light portable sawmills and wood-working machinery generally.
- (33) Machinery for the manufacture of jute and for making jute fiber.
- (34) Machinery for the manufacture of coir fiber and other fibers, particularly banana and pineapple.
- (35) Cotton and woolen machinery.
- (36) Rubber-making machinery.

- (37) Celluloid machinery and camphor-refining machinery.
 - (38) Machinery for the manufacture of seed oil, cocoanut oil, etc.
 - (39) Machinery for the utilization of the sunflower plant, both seed and pith.
 - (40) Banana-flour machinery.
 - (41) Coffee and tapioca machinery.
 - (42) Arrowroot machinery and corn-flour machinery.
 - (43) Rice-hulling and rice-polishing machinery.
 - (44) Match-making machinery (automatic preferred).
 - (45) Paper machinery.
 - (46) Cheap printing machinery.
 - (47) Steam boilers, engines, pumps, heaters, and steam appliances of all kinds.
 - (48) Hot-air and other self-running pumps.
 - (49) Kerosene engines and other cheap power, including small kerosene motors for narrow-gauge railways (about 2 horsepower).
 - (50) Small kerosene launches for river use.
 - (51) Cheap clocks, watches, jewelry, bicycles, tricycles, sewing machines, etc.
 - (52) Cheap door bolts, hinges, locks, etc.; also cheap cabinet locks and hinges.
 - (53) Cheap lamps for wall and table and for street lighting.
 - (54) Cheap water heaters, using oil, wood, or charcoal for fuel.
 - (55) Sanitary appliances of all kinds, especially those suited for tropical climates.
 - (56) Ready-made buildings adapted to the Tropics.
 - (57) Cheap wooden furniture, such as can be shipped "knocked down;" also furniture-making machinery.
 - (58) Cheap crockery and glassware.
 - (59) Rubber boots, rubber suits, and miscellaneous rubber goods.
 - (60) Cheap boots and shoes; must be good and strong.
 - (61) Woolen hose, cotton hose, etc.
 - (62) Dyewood extracts and dyes in general.
 - (63) Sugar, confectionery, canned fruits, and preserved goods generally.
 - (64) Photographic apparatus and supplies.
 - (65) Drugs, medicines, and proprietary articles.
 - (66) Gasoline, acetylene, and other lighting apparatus.
 - (67) Best lubricating oils.
 - (68) Mechanics' tools, farming implements, etc.
- Also notions, sundries, and labor-saving devices of all kinds.

H. W. S. EDMUNDS,
Twa-tu-tia, Tamsui, Formosa.

TEA INDUSTRY IN FORMOSA.

The tea season of 1898 will be written down in Formosa commercial history as a memorable one. The United States, as the chief purchaser of Formosa Oolong, is an interested party, and this is my excuse for so voluminous a report. Besides a review of the season and a description of the manufacture of Pouchong tea, I have appended statistics on the general commerce in the island and the share each foreign nation has in the same, with the special object of illustrating the important part tea plays in the island's trade.

The question of a duty of 10 cents a pound arising during the spring of 1897, created during that period an exciting market, from which all did not escape unscathed; but the season of 1898, just ended, was even more unsatisfactory and will long be remembered as most depressing. This was largely due to the tax placed on tea in the United States. It came at a time when considerable purchases had been made for the home market, and, as the teas had to compete with a large stock of old teas held in the United States, duty free, the losses sustained by some merchants are said to have been very severe. Buying continued, however, in a small way until news reached the island of sales of new tea in New York at prices below those ruling in Formosa. Trade then ceased for a time; but, regardless of this, the prices remained firm, the Chinese showing no anxiety to dispose of their teas at prices in accord with those existing in New York. Later, several firms entered the market, doubtless confident that New York prices would recover, and considerable purchases were made. Up to the present, however, their hopes have not, I believe, been realized, and there is at present an unsold stock of some 15,000 half chests (600,000 pounds) in Amoy, which, when it does eventually find its way to New York, will—as much of the tea that went before it—unless some favorable change takes place during the winter or the duty is withdrawn, result in considerable losses. Already, a number of Chinese packing houses have closed their doors, and by next spring it is quite likely that the local business will be in fewer hands. Among the foreign houses, however, one firm with offices in New York has secured commodious quarters and will engage in the tea trade the coming season.

The Japanese authorities are showing some interest in the trade, and an attempt has been made to organize all native tea men into associations, with a view to general improvements in the method of cultivation. It is hoped that their efforts will result satisfactorily. There has been each season a marked deficiency in the better grades of Oolong, as compared with the preceding year, owing, it is generally claimed by the natives, to unsuitable weather. The true cause, a local expert asserts, is the neglect to prune the bushes and fertilize and irrigate the soil. No care whatever is taken of the plant, which in some plantations is practically allowed to grow wild. Then the picking is improper, the leaves being pulled off in bunches instead of one by one, thus separating the grades. It is accordingly feared that unless the local authorities take the matter in hand and adopt some system of compelling the owners of gardens to take better care of the plant, Formosa tea, like Amoy Oolong, may in time deteriorate to such an extent that it will cease to be in demand.

The probable export for the season will be:

Description.	To—	Quantity.	
		Half chests.	Pounds.*
Oolong	United States.....	410,000	16,400,000
Do.....	Europe.....	17,116	648,652
Pouchong	Various eastern markets.....	81,000	2,450,000

* These figures include the 600,000 pounds or so unsold stock remaining in Amoy and which will doubtless eventually reach the United States. The export to the United States for the year 1898 is 15,768,642 pounds, valued at \$2,531,469 in United States gold. Correct and complete figures for the season can not be given until the unsold stock is disposed of.

Compared with last season, the export of Oolong to the United States will probably show a falling off of about 10,000 half chests (400,000 pounds). As to value, the average price has been 8 to 10 yen (\$4 to \$5) a picul (133⅓ pounds) lower than last year, which means a decrease of about \$300,000 in United States gold on the total crop, and shows that the Formosan growers are paying a part of the American tax on tea.

The United States not only consumes 90 per cent of the Formosa Oolong, but, with the acquisition of Hawaii, it now becomes a buyer of a part of the island's Pouchong tea. Although the trade is a very trifling one, it is growing; and as Formosa Pouchongs have not before figured in American trade returns, a short description of the industry will perhaps prove of interest. The term Pouchong means literally "the kind in bags," referring to the small paper bags which are sometimes used in making up small packages of tea. In Formosa, however, the term is applied to scented tea almost wholly, and it is the manufacture of this product I will now describe.

The manufacture of Pouchong in Formosa is a comparatively new industry, having been introduced into the island by a Chinese merchant in 1881. As yet, the demand for these teas, though increasing, is very slight, and the production during the last two years has averaged only some 18,000 piculs (2,399,400 pounds), valued at upwards of 450,000 yen (\$225,000 in United States gold), which is about 12 per cent in quantity and 6 per cent in value of the total production of Formosa tea.* It might appear to the reader that the opposition of dealers desiring to obtain tea for manufacture into Pouchongs would interfere, to a greater or less extent, with the Oolong trade. It does not, however, as generally only the inferior teas are utilized for Pouchongs; and this takes from the market the

* Japanese customs reports give the total Formosa tea export for 1897 as 20,504,610 pounds, valued at 6,920,630 yen (\$3,460,315), and of that amount 2,441,215 pounds, valued at 460,910 yen (\$230,455), was Pouchong tea. In 1893, the export of Pouchong was 1,812,667 pounds. In 1894, it reached 2,290,266 pounds, and, high prices ruling, the production brought 760,930 yen (\$380,465) to the Formosan dealers. The Japanese customs returns for 1898 have not yet been published, but I learn that the total export of Formosa tea amounts to 19,990,466 pounds, of which 2,719,169 pounds is Pouchong tea.

undesirable leaf, which would otherwise, to a large extent, be worked off in Oolong, thus lowering the quality of the latter. Formosa Pouchongs find a market in Java, the Straits Settlements, Hongkong, Anam, Siam, Hawaii, and San Francisco. It is almost exclusively consumed in these various markets by Chinese colonists residing there. As yet, the scented tea has found no favor with Europeans; for, although the mixture is very fragrant, it is the fragrance of a bouquet of flowers and does not appeal to foreigners as a pleasant beverage.

While Oolong is the pure leaf without the addition of coloring or flavoring matter, Pouchong is the leaf artificially flavored with the scent of certain flowers, obtained by placing it in direct contact with freshly picked blossoms. There has been no chemical flavoring as yet discovered that can replace these. Tons of the strongly scented blossoms of white jasmine, common jasmine, and olea, known to the Formosan natives as "su-eng," "boat-li," "chiu-lan," and "ng-ki," respectively, are gathered yearly, to be used in the manufacture. In fact, such large quantities are required that the production of these flowers has become an industry in itself.* Scarcely an hour's walk from Twatutia will bring one to the vicinity of large gardens filled with these fragrant plants. The prices of the blossoms vary with the demand, but generally range from 5 to 28 yen (\$2.50 to \$14) a picul, according to the kind, the white jasmine being the most expensive and the gardenia the cheapest.

Several different processes are in use in the manufacture of Pouchong tea, but the general principle is the same. There are several grades, also, which depend chiefly on the kind and quantity of the flowers used. The proportion of blossoms to tea runs from 30 to even 60 per cent, the latter being the case when the olea flower is utilized; and in making one particular grade, all the flowers are used mixed together.

The most common method of manufacture is as follows:

Tea in the green leaf—the same at this stage (though perhaps of a lower grade) as the Oolong exporters might be asked to buy—having been brought in from the country, is spread out on the floor. The sweet-smelling blossoms brought from the various gardens, freshly picked, after having been well sprinkled with water, are mixed with the green leaf, and the mixture is then piled up to a height of 7 or 8 feet, separated by numerous small partitions running out from the side of the room. The stuff is now carefully

* While in Formosa, only four varieties, as above mentioned, are at present used in the manufacture of scented teas, in China, the list is more extended, and, according to Fortune, consists of the following: Rose, plum, orange; *Jasminum Sambac*, Ait; *Jasminum paniculatum*, Roxb.; *Aglia odorata*, Roxb.; *Osmanthus fragrans*, Lour; *Gardenia florida*, L. (See page 26, vol. xxiv, Translations Asiatic Society of Japan, "A list of plants from Formosa," by Henry.)

covered with a cloth, to prevent the escape of the fragrant odor. After some seven to seventeen hours, the time depending upon the kind of flowers used and the season, the scent from the blossoms is found to have thoroughly permeated the tea leaves; and the mixture is then turned over to the tea-picking girls, who separate the now withered blossoms from the tea leaf. In the case of the olea flower, however, the separation is usually done by the aid of a sieve, after the tea has been dried, as the blossom is too small to be easily picked out by hand. When this has been completed, the tea is put on the fire for seven hours, being subjected to about 180° F. of heat; and at the conclusion of this, the manufacture is considered complete. It is then taken to the packing room, where it is packed in small, gaudily labeled paper bags, holding a pound or more each. These, in turn, are packed in half chests, the same as used for Oolong; and the Pouchong is now ready for export.

The production of Oolong is the most important and valuable industry in Formosa. Although occupying but one-sixth of the territory utilized by sugar, but a fraction of that given up to rice, or of the area covered with the vast camphor forests, the production brings to the island nearly five times the receipts obtained from sugar, over five times that obtained from camphor, and more than one-half of the total value of the whole export trade of Formosa.* Its importance to North Formosa may be judged by noting that on an average, 86 per cent of the export receipts are obtained from tea. It may not be too much to say that the very existence of the port of Tamsui (Hobe) is dependent upon this industry.

If the season is an unprofitable one to growers and packers, a noticeable reduction occurs in the demand for piece goods and other foreign imports, and, should the industry be ruined, as it has been in the neighboring districts of Amoy, the general trade of North Formosa would be almost nil, thousands thrown out of work, and the Japanese Government revenue directly and indirectly cut down perhaps 1,000,000 yen (the present direct taxes from tea yield over 500,000 yen—\$250,000).

In United States trade with Formosa, tea is the leading item. In 1897, the export of tea from Formosa to the United States amounted to 5,705,998 yen (\$2,852,999 in United States gold).† The total trade with the United States was 6,517,658 yen (\$3,258,829 in United States gold).

Putting aside the large trade which the natives carry on with the

* In 1897, the export of sugar was 1,494,041 yen (\$747,000); camphor, 1,339,435 yen (\$669,000); tea, 6,920,630 yen (\$3,460,000); total export from Formosa, 12,759,293 yen (\$6,379,000); total export from Tamsui, 8,315,766 yen (\$4,157,000).

† Practically no direct tea shipments are made from Formosa, the tea being forwarded to Amoy and shipped from there. The commodity is recorded in the Chinese customs reports as "reexport from Amoy."

mother country (China), and which the customs reports give as 17,242,134 yen (\$8,621,962), the Oolong tea trade places us in a very prominent position in the commerce of Formosa, as will be observed from the following table for the year 1897:

Country.	Imports.		Exports.		Total.	
	<i>Yen.</i>		<i>Yen.</i>		<i>Yen.</i>	
United States.....	811,660	\$405,830	5,705,998	\$2,852,999	6,517,658	\$3,258,829
Hongkong.....	411,101	205,550	1,655,976	827,983	2,067,078	1,033,534
Great Britain.....	1,375,777	687,888	261,681	130,840	1,637,458	818,729
British India.....	439,098	219,549			439,098	219,549
Anam and other French Asiatic possessions.....	105,565	52,782			105,565	52,782
Germany.....	353,862	176,931			353,862	176,931
Russia.....	69,356	34,678			69,356	34,678
Siam.....	51,920	25,960			51,920	25,960
Korea.....	43,140	21,570			43,140	21,570
Philippines.....	18,405	9,202	14,736	7,368	33,141	16,570
France.....	10,010	5,005			10,010	5,005
Belgium.....	7,985	3,992			7,985	3,992
Holland.....	5,519	2,759			5,519	2,759
Austria.....	4,705	2,352			4,705	2,352
Other European and American countries.....	1,587,633	793,816	8,038	4,019	1,595,671	797,835
Total (including China).....	12,659,298	6,329,649	12,759,293	6,379,646	25,418,591	12,709,285

The exports of Formosa tea to both the United States and Great Britain via Amoy, China, are included in the above table. The preceding year (1896) witnessed a heavier tea export, the total United States trade for that year including tea amounting to 7,717,789 yen (\$3,858,894). Of the 1,655,976 yen (\$827,983) given as exports to Hongkong, 1,339,435 yen (\$669,717) represents the export of camphor, which is shipped to Hongkong for reexport from that port to India, Germany, Great Britain, and the United States.

JAMES W. DAVIDSON,

TAMSUI, *January 7, 1899.*

Consul.

ELECTRICAL MACHINERY AND LEATHER IN JAPAN.*

Under date of February 6, 1899, Consul Lyon, of Osaka, writes as follows:

ELECTRICAL AND FARMING MACHINERY.

It may be said that our country has the Japanese market in electrical machinery. In my annual report to the Department for 1897,

* This report is in answer to inquiries by the director of the Philadelphia Commercial Museum, to whom Advance Sheets have been sent.

I gave the exports to Japan in this line from the United States, Great Britain, and Germany.*

Electrical engines are also imported from the United States, and they are giving general satisfaction.

Telegraphic machinery was imported into Japan during 1897 as follows:

United States.....	\$2, 301
Great Britain.....	1, 102
Germany.....	691

But little came from any other country. The Japanese Government owns both the telegraph and telephone service.

It is said that considerable delay has frequently occurred in the execution of orders from Japan for electrical machinery in Europe, and that, in consequence, the American market has been given the preference, with the result that the superiority of such machinery has been fully established here.

The more direct communication between the United States and Japan, together with the lowering of overland freights, should stimulate manufacturers of machinery to increased effort for this market.

As to agricultural machinery, there is no opening for it. The low price paid for farm labor tends largely to exclude it, but there are other reasons. The land is kept under continual cultivation, and there is no sod to break up; consequently, but little work is necessary to prepare the soil for seed. The rice and other fields are small and irregular in shape, and adjacent fields vary in level from a few inches to several feet, in order to facilitate irrigation, and, on account of the latter, it would be most difficult to move machinery. The time may come for it, but not under present conditions.

LEATHER INDUSTRY.

The importation of sole leather into this port from the United States, the principal country exporting that article here, fell off somewhat during 1897; but there was a very notable increase during the first six months of 1898, as compared with the corresponding period of 1897: Half year ended June 30, 1897, \$9,894; 1898, \$64,161.

British India is the only competitor worthy of note in exporting sole leather to Japan. During 1897, she sent here \$64,930 worth, against \$162,055 from our country.

The principal countries exporting "other" leather (as classified in the customs returns) to Japan are:

Siam.....	\$232, 821
United States.....	87, 084
Great Britain.....	75, 425

* See CONSULAR REPORTS No. 220 (January, 1899), p. 32.

In order to show the extent of the leather trade in Japan, the following table is given, taken from the customs returns for 1897, those for 1898 not yet being published:

Imports in 1897.

Articles.	Quantity.	Value.
	<i>Pounds.</i>	
Sole leather.....	1,421,800	\$231,262
"Other" leather.....	1,430,860	461,280
Leather ware.....		21,759
Hides:		
Buffalo and cow.....	2,632,680	173,197
Deer.....	242,147	29,963
Sanba (elephant).....	303,004	16,053
Boots and shoes.....	*13,371	9,540

* Pairs.

Nearly all the boots and shoes imported come from the United States, and, as ascertained from recent customs returns, a very noteworthy increase took place during the first nine months of 1898, as compared with that period in 1897, both in the importation and exportation of boots and shoes, as may be seen by the following table:

Imports and exports of boots and shoes.

Description.	1897.		1898 (9 months only).	
	Quantity.	Value.	Quantity.	Value.
	<i>Pairs.</i>		<i>Pairs.</i>	
Imports.....	13,371	\$9,540	25,123	\$15,110
Exports.....	16,540	8,655	23,965	14,286

Should the proportion hold good during the balance of 1898, as it probably will, the relative imports and exports will stand thus:

Description.	1897.		1898.	
	Quantity.	Value.	Quantity.	Value.
	<i>Pairs.</i>		<i>Pairs.</i>	
Imports.....	13,371	\$9,540	33,497	\$20,147
Exports.....	16,540	8,655	31,953	19,048

Shoemaking machinery has not yet been introduced into Japan.

Monthly returns for the period between January 1 and October 1 last (nine months) show importations of sole leather during that time to have exceeded in value the total importation during the whole of the preceding year by more than \$10,000, which makes it probable that the total imports of sole leather into Japan during 1898 will

exceed the year 1897 by at least \$100,000, the greatest increase coming from the United States.

During 1897, Japan exported to other eastern countries 277,660 pounds of various leathers, valued at \$94,472. Leather is used here also in manufacturing hand satchels, for furniture coverings, and for machine belting, the latter being made in Osaka and Tokyo from the best stock imported.

Japanese leathers of all kinds are cheaper than those imported, and the quality is correspondingly poorer.

As may be seen by foregoing table, rawhides more than double the quantity of those tanned are sent to the country. These come principally from China and Korea, and are buffalo and cow skins. They are used largely as soles for the straw sandals ("sekida") so universally worn in this country. Rawhides are also made into harness and are used in many other ways as we use tanned leather.

TANNERIES.

There are but two tanneries of any magnitude in operation throughout Japan—one located in Osaka and the other in Tokyo—and they are chiefly occupied in supplying the leather wants of the army and navy.

A large tanning establishment is located near Kobé. It was formerly under European management, but, after several unsuccessful attempts to operate it, it has been closed. There are, however, many small "home tanneries" in this country, and they are operated exclusively by the "Etas," a class of persons whose occupation is looked upon as unclean. The beggars "Kojiki" constitute the lowest class in Japan, and next above them are the "Eta," who monopolize the occupation of killing animals for food, the tanning and dressing of leather, grave digging, and similar work. The "Etas" are popularly supposed to be in possession of a secret method of tanning.

Tanning being looked upon in Japan as a degraded calling, it is not probable that the industry will materially improve here in the near future; and it is for that reason, together with the additional ones that cattle are scarce in this country, and that there is a growing demand in Japan for leather of all kinds, that the United States has a field in which it may largely increase its exportation of this article year by year.

SAMUEL S. LYON,
Consul.

OSAKA, *February 6, 1899.*

IRON-NAIL TRADE IN JAPAN.

The following, dated Yokohama, March 4, 1899, has been received from Consul-General Gowey:

The inclosed clipping from the Japan Gazette of this date, being a translation from the Jiji Shimpō, a native newspaper, indicates the progress of attempts to establish the manufacture of iron nails in Japan. The writer is not accurate in his statements concerning the growth and present condition of the import trade. The following figures, based upon the customs reports of the Japanese Government, show the quantities and values of iron nails imported during the years 1895 and 1898:

From—	1895.		1898.	
	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>		<i>Pounds.</i>	
Belgium	2,517,349	\$47,014	292,135	\$6,606
France	78,190	1,757	10,005	443
Germany	26,700,901	532,922	3,453,624	65,431
Great Britain.....	2,839,350	53,984	649,340	13,765
United States.....	134,589	2,531	27,544,784	488,907
Other countries.....	87,081	819	1,056	18
Total	32,366,460	639,027	31,950,944	575,170

MANUFACTURE OF IRON NAILS IN JAPAN.

Many years ago, an attempt was made to establish an iron-nail factory in Japan, but it failed. Toward the close of 1897, Mr. Yasuda Zenjiro, of Tokyo, started the manufacture of nails by constructing a factory named Yasuda Nail Factory. The business of the factory has been expanded threefold since the beginning of the industry. It is said that considerable difficulties were experienced at the commencement, but that at present the workmen engaged are skilled in the work, though they can still only do one-third the labor done by American workmen. For example, in the case of physical power, an American workman can handle the material as heavy as 130 pounds, whereas it requires two Japanese to do the same. The present output of the Yasuda Nail Factory is about one-third of the quantity imported, and the nails produced are said to be not so much inferior to imported ones as might be expected. Whether the home-made article can beat the foreign one is a question. The quantity at present imported annually is about 320,000 kegs, nine-tenths of which are imported from America and the rest from Germany. One obstacle which the Japanese have to reckon with in competing with foreign nails is the change of the customs tariff. It is unfortunate for the home manufacturers that the authorities have, without reflection, raised the rate of tariff on the material for making nails. However, the cheap labor in Japan still leaves a certain margin which will enable the home manufacturers to compete with the imported article. If the import duty on the material is lowered in the future, not only will the importation

of foreign nails be stopped, but home-made nails will be exported to Korea and other countries in the Far East. Two or three years ago, nails were mostly imported from Germany; but since then, America has contrived to take and hold the lead. Last year, however, American business companies engaged in the iron trade held a meeting and decided to keep up the price of nails. The result is that Germany has taken advantage of this decision to export her goods to Japan more actively than before.

MOUSSELINE DE LAINE AND RIBBONS IN JAPAN.

The inclosed clipping from the Japan Times of this date contains some interesting facts relative to the establishment of new industries in Japan in the manufacture of mousseline de laine and ribbons.

In connection therewith, it is worthy of note that sheep raising has not succeeded in Japan, and that all of the wool used here is, and must be for many years, imported from abroad. The market for ribbons, in my opinion, will not become very large, owing to peculiarity of fashions in the costumes of Japanese women.

JOHN F. GOWEY,
Consul-General.

YOKOHAMA, *February 4, 1896.*

MOUSSELINE DE LAINE.

Mousseline de laine is imported into Japan to quite a large extent, customs returns for 1897 and 1898 showing 7,000,000 and 6,000,000 yen (\$3,486,000 and \$2,988,000) worth, respectively. It was for the purpose of supplying this demand that three factories for the manufacture of this special fabric were established since the termination of the war. Of these, the one situated in a suburb of Tokyo is the largest, having been established in March, 1896, by 145 leading capitalists in Tokyo and Yokohama with a capital of 1,000,000 yen (\$498,000). But it was on July 1 of last year that the business was actually initiated under the supervision of a French expert. The shops employ about 1,300 operatives, and during the last half year produced 666,241 yards of the fabric, besides 286,524 pounds of worsted. The fabric brought 142,000 yen (\$70,716) approximately, the average selling price per tan being about 4.60 yen (\$2.29 per 24 yards). The daily working rate of the company is said to be 650 tan (15,600 yards) of the fabric and 3,000 pounds of worsted.

RIBBON MAKING.

Extremely limited as the application of this art still is in Japan, and hence comparatively rudimentary, there exist none the less three ribbon-weaving establishments—one in Tokyo, another in Mayebashi, and the third in Hamamatsu. The industry owes its inception, not to direct foreign tutelage, but to imitation of goods of foreign make. Not possessing even the knowledge of properly handling the ribbon machines sent from abroad, it is not to be wondered at that the Japanese ribbons can not yet bear comparison with the imported article. Ignorance of skillfully employing gassed yarns, as is done by foreign ribbon weavers, involves the use of a larger quantity of silk, resulting in the comparatively larger cost of production.

However, the home-made goods satisfy ordinary requirements, and they are being employed for hat decoration, and so forth, in growing quantities. The average monthly output from the three shops is 1 gross rolls, or about 1,500 yards. We are told that foreign merchants residing in Japan consider the ribbon business here a hopeful one.

SPINNING INDUSTRY IN JAPAN.

Consul-General Gowey sends from Yokohama, under date of February 17, 1899, a newspaper article which states that the number of cotton-spinning mills in Japan in November, 1898, was 77, and the number of spindles 919,074. The quantity of raw cotton worked up during the year totaled 27,343,000 pounds, and the output of yarn was 23,773,000 pounds. The article quotes returns from eighteen companies during the last six months of 1898, showing that only three report an improvement in dividends as compared with the first half of the year, and only two have maintained or bettered the dividends paid by them in the second half of 1897. Eight out of the eighteen, or 44 per cent, paid no dividend at all. The writer continues:

It must be rather a miserable reflection for the shareholders that, if they had their money in Government bonds, it would be giving them a return of 5.37 per cent at present market rates, and that if they had it deposited in the banks, it would be producing 7 per cent; whereas, in the case of eight mills, it gives no return at all, and in four produces only 5 per cent or less. It is interesting to note that the adoption of gold monometallism is frankly blamed for these bad results. China, it is said, which is the chief customer for Japan's yarns, has become a constantly falling market from the point of view of a gold-using nation, and it is for that reason that the mill owners are so anxious to see a China-Japan bank established, working on a silver basis. We must confess that such an analysis of the situation seems very partial. Assuredly, exporters of goods from a gold monometallic country have considerable difficulties to contend against when their markets are among silver-using peoples, so long as the appreciation of gold continues. There never was the least uncertainty on that head among foreign observers of Japan's currency arrangements. Since Japan became gold monometallic, however, there have been no fluctuations of exchange at all comparable in severity to those of past years; yet British manufacturers managed to find their account in supplying silver-using nations throughout the whole period of the sharpest appreciation of gold. How can it be pretended that the same obstacle in a greatly reduced form is responsible for the recent failure of Japanese mills, especially when Japan's home market is of far more importance to her cotton spinners than the Chinese market, the latter taking what may be called her surplus produce only? The cause is to be sought in some conditions independent of exchange. Defective organization, unskillful methods in laying in raw material, increased cost of labor, and want of cheap working capital—these are the reasons assigned by foreign critics who should be competent to give an intelligent opinion.

Further reasons, adds the consul-general, are said to be the payment of inflated dividends from other than net profits, and the failure to set aside anything for depreciation of plant, sinking fund, etc.

FOREIGNERS IN JAPAN.

In reply to inquiries by a New York news association (to whom the original letter has been forwarded), Consul Lyon, of Hiogo, on February 9, 1899, says:

Generally speaking, there is no discrimination here in the treatment of foreigners. I believe that law-abiding tourists, equipped with a Japanese traveling passport, may go anywhere in this Empire as free from molestation as in almost any other country. Japan offers no advantages to a pushing young man superior to those at home. In fact, I should say no young man dependent upon his own exertions should come here expecting to find employment awaiting him, unless arrangements have been made beforehand with some home firm having an agency at one of the open ports.

After this country is thrown open by the operation of the new treaties, which come into effect next July, there will be more opportunity for foreign enterprise of all kinds, and possibly a greater demand for the services of young men without capital; but at present, everything of that nature is confined to the open ports.

The Japanese themselves are counting on a great influx of foreigners with capital at that time. I think the most enterprising class will be willing to welcome foreigners, but as to their desire for foreign capital in order to further develop their country, there can be no question. It has been clearly pointed out to them, however, that this capital will not be forthcoming unless properly safeguarded in certain ways by the Japanese Government, such as, for instance, the ownership of land by foreigners and the holding by them in their own names of shares in foreign companies. Whether or not these and other necessary concessions will be made is problematical; but the indications are that they will be, as the policy of the "New Japan" is rapidly gaining ground.

If all obstacles to the introduction of foreign capital into Japan were swept away, there certainly would be a largely increased field for the development of American industries, and that would bring with it a demand for the services of capable young men, with or without capital.

It should be noted that capitalists intending to enter this field need to exercise the utmost caution in their investments, and they would do well, in the prosecution of their enterprises, to associate themselves with long-established foreign firms at the open ports, who understand the country and the customs of the people.

As to the specific question, "Would it be wise for a young American without capital but with plenty of push to come to Japan," I would say it would be most unwise. He could not come for a less expense than \$300, and it would be unsafe for him to be in this country looking for employment without about \$200 to live on, in the contingency of his finding none, and also the further sum of \$300 to pay his passage home, should he find no opening.

TREATMENT OF MISSIONARIES IN CHINA.

Minister Conger sends from Peking, under date of February 19, 1899, the following printed translation of a proclamation posted in Tientsin:

The following proclamation was posted in the native city and this port on Friday last, 10th instant, by the Tientsin magistrate:

"Notice is hereby given that I, the Tientsin magistrate, have received a dispatch from the Viceroy Yü saying that he had received the following edict from the ministers of state with instruction to forward it at once to all viceroys and generals:

"EDICT, ISSUED 27TH OF TENTH MOON.

"I, the Empress Dowager, have been informed that anti-Christian movements have taken place in many provinces, and that these troubles have all arisen from the false sentiment of treating the missionaries as enemies; in consequence of which it is easy for misunderstandings to occur. The people do not understand that the preaching of Christianity by westerners is permitted by and stipulated for in the treaties with foreign nations. Our Government is a generous one, and we treat the preachers of all religions as good citizens, and no prejudice is tolerated by us. The missionaries of the different nations come here and preach to our people what is in their books, and though each has a distinct doctrine, the common aim of all is to induce people to be good and do good. All evil and crime are not only prohibited by our laws, but are also prohibited by the Christian religion. For instance, the would-be rebellion in Kiangsi which Yang Kungch'ên tried to raise was found out and reported to us by a man belonging to the Christian religion. Thus it will be seen that a good man, whether he is a Christian or not, will obey the principles of being honest and true to others. We therefore immediately rewarded the said Christian, Lin Tsai-to, in order to show our impartiality to all. Hereafter, I desire that all people will treat foreigners as their own countrymen, and avoid all misunderstanding with them. I explain this fully now, and command all viceroys and officials in provinces to emphasize my sincerity by exerting themselves to suppress all agitation among the people before any anti-Christian prejudice is displayed.

"In everything justice must be shown, and no distinction must be made for native Christians, and native Christians must not show any ill will towards their fellow-countrymen. They must obey the officials and love and be kind to their neighbors. Let philanthropy be their ruling motive, so that they may not misunderstand what is the earnest desire of both the Government and the missionaries. I, though I remain in the palace, always have this in my mind, and now urge and command you to act accordingly. Let all viceroys copy this edict and send it to their subordinate officials to notify the people. Let the old and young, the wealthy, the learned, and

the common people all take note and understand that the Christians do not do things forcibly and under foreign protection, so that the people will not have their minds prejudiced and disturbed. Thus may there be peace and happiness between the officials and people and Christians at all times.'

"On receiving this edict, I, the Tientsin magistrate, now accordingly notify you soldiers, merchants, and all people that you must not illtreat Christians. You must be honest and peaceable and not create any misunderstanding. You must not hereafter circulate rumors or cause trouble; and you Christians are also cautioned against evil and the violation of those laws intended to render both you and the people happy and prosperous, and to carry out the Government's beneficent intentions towards you."

SHANGHAI IMPORTS FROM UNITED STATES.

I send herewith table of principal American imports into Shanghai during 1895-1898, and the value of flour imported into China in 1896-1898.

Of the cotton goods imported from the United States into Shanghai, 90 per cent is reexported to Chefoo, Tientsin, and Niu-chwang and is consumed in the provinces tributary to those ports. About $6\frac{1}{2}$ per cent is sent to Yangtze River ports, and the remainder is consumed in this province and the province immediately south of this.

As the customs returns give only the value of the flour imported, the quantity can not be stated definitely; I would estimate that our flour was imported into China in 1898 to the amount of 59,000,000 pounds.

JOHN GOODNOW,
Consul-General.

SHANGHAI, *February 28, 1899.*

Principal articles of import into Shanghai from the United States.

Articles.	1895.	1896.	1897.	1898.
Drills pieces...	586,983	1,214,652	1,499,117	1,298,911
Jeans.....do.....	22,000	52,500	68,000	105,603
Sheetings do.....	891,358	2,248,052	2,426,368	2,472,115
Kerosene gallons...	16,033,080	25,750,090	36,909,060	42,339,020

Value of flour imported into all China.

Year.	Value.	
	<i>Tael.</i>	<i>\$.</i>
1896	1,505,653	\$1,221,085
1897	1,221,516	902,700
1898	1,774,712	1,231,650

*According to the quarterly returns of the United States Director of the Mint, the average value of the haikwan tael in 1896 was 81.1 cents; in 1897, 73.9 cents; in 1898, 69.4 cents.

MINES IN SHANTUNG.

In previous reports I have alluded to the coal and other mines in Shantung.* I now inclose a very interesting report on the coal and other mines in the department of Tai-an, kindly prepared for me at my request by Mr. Earle D. Sims, of Tai-an-fu, the capital city of the department of that name.

I have all the samples mentioned, and would send them but for the expense and uncertainty, in my mind, as to their value. Yesterday I showed them to two miners from Colorado. They at once recognized the sample, of which Mr. Sims says, "I send you a sample of a stone which is seen in many parts of this section," as a very good specimen of galena, very rich in sulphide of lead, and they told me it would make very good German silver. The specimen mentioned in section 17 of the report, the miners told me, had strong marks of silver and traces of gold.

I showed samples of mica from another department to the miners, and they told me it was good, and they had no doubt that clear blocks could be cut out. The mica in the United States, I am informed, is too hard and brittle for electric motors; consequently, it must be obtained from India. The samples I showed the miners were soft, split readily, had a dark, cloudy appearance in the mass, but when split with the finger nail seemed quite white and transparent.

I also showed them samples of gold ore. Finally, I picked up a piece of ore $2\frac{1}{2}$ inches long, $1\frac{1}{2}$ inches thick, tapering to an edge, and about 2 inches wide; weight, 11 ounces (avoirdupois). One side is weather beaten; the other, where it had been knocked off, is almost black and nearly covered with a substance like newly cut lead. I said, "Here is a sample of lead." They examined it and said:

Yes, there is lead in it, as well as copper and gold; but this piece is at least 30 per cent pure silver, and if you were to follow the vein, we think you would strike a vein of pure silver, which, if assayed, would run from \$600 to \$1,000 the ton.

Several parties at home have written to me with a view of entering this field and investing in mines. I should be delighted to see our countrymen in this province, but I fear that German opposition would prevent. (See Paragraph IV, page 558, CONSULAR REPORTS No. 219, December, 1898).

The Germans are fully alive to the resources of the province; while nothing definite has yet been accomplished, they are exploiting. It is possible that with so much hard coal, oil will be found.

* See CONSULAR REPORTS No. 198 (March, 1897), p. 384; No. 215 (August, 1898), p. 602; No. 219 (December, 1898), p. 556; No. 215 (August, 1898), p. 602; and Commercial Relations, 1896-97, Vol. I, p. 989.

Mr. Sims's report is confined to only one department; there are ten in Shantung, and each is called a "fu," ruled over by a prefect. The department is again divided into hsiens, or counties, ruled by a magistrate. Tai-an-fu department has six counties, or hsiens, and one chou, or district, ruled by an official higher than a county magistrate. The area of the province is 69,000 square miles. The area of the department of Tai-an is 4,244 square miles. The population of Shantung is 29,000,000. The population of Tai-an is 2,000,000. The department of Tai-an is almost as large as Connecticut, and its population is nearly two-thirds that of all New England. This is the most sparsely populated of any of the ten departments.

JOHN FOWLER,

CHEFOO, *February 16, 1899.*

Consul.

MR. SIMS TO MR. FOWLER.

As you requested some few months since information regarding mines in this section, after a careful investigation I have the honor to give you the following:

Mines are quite numerous here, this section having the highest mountains in China. I myself know nothing about mining and can only give you information of mines which are known.

(1) In Shin Tai Hsien (county), less than a mile east of Wan Yea To Tswang and about 47 miles southeast of Tai-an-fu, is a good coal mine which has been but little worked, and has been closed for seven years on account of the owner not having money enough to work it. It has three wells, 93, 88, and 60 feet deep, respectively. The coal is a vein 1 foot 9 inches thick, and is known to be at least 400 feet square. I send you a specimen of this coal.

(2) In Shin Tai County, at Chwan Kou Tswang, is a mine which was worked a little with excellent results. The coal is 4 feet thick. It had one well 242 feet deep to the coal. Two men had claims to the mine, and they disputed and at last went to law. It was decided that neither could work the mine, and the shaft was filled up. This mine can be bought. Specimens forwarded. There are three shafts thought to be working on the same vein, at about the same depth, each about 1 mile from this mine in different directions. They are successful mines, considering the primitive mode of working, and I do not think the parties would sell except for a liberal offer.

(3) In Shin Tai County, 53 miles southeast of Tai-an-fu, at Lin Tu Tswang, is a mine which has attracted not a little attention, as silver and gold were found there until February, 1898, when part of the mine fell in, killing several men. Lawsuits followed, and the county official ordered the mine closed. It can only be worked again by permission of the county magistrate.

(4) In Shin Tai County, 50 miles east of Tai-an-fu, at Chon Che Chwan Tzi, is a silver mine just opened this year. It was worked with profit until the magistrate heard of it, and, fearing lawsuits, ordered it closed. It can only be opened again by his permission.

(5) In Shin Tai County, 40 miles east of Tai-an-fu, at Fu Ch'ou Tswang, is a well-known mine, now not in operation for want of money. This coal does not seem to be in a vein, but in enormous scattered masses. This mine has three wells, the deepest 144 feet and the shallowest 108 feet.

(6) In Shin Tai County, at Yea To Tswang, 44 miles east of Tai-an-fu, is a coal mine just opened this year and worked with excellent results. The Germans during the past year spent some little time in the vicinity of Shin Tai City, looking up mines. They wanted to buy; but the people did not understand their meaning, and no one would sell. Reports were circulated of the awful intentions of the "foreign devils." If any foreigners wish to buy land there, I think I could help them to get it through Chinese friends.

(7) At Hsi Ku Chung Tswang, in Ning Yang Hsien, about 27 miles south of Tai-an-fu and 1.3 miles north of that village, is a well-known coal mine. When worked (all mines here are worked by primitive methods) it had three wells, 100, 90, and 82 feet deep, respectively. The coal is a vein 5 feet 3 inches thick, and at least 900 feet square. About 80 feet has been mined, and quite successfully. The mine was closed over ten years ago because of famine in that section. The people can not buy coal. The little fire they use is of grass, roots, etc., and, as the Chinese can not transport coal any distance, but depend upon the local community, the demand would not justify the expense of mining. The mine can easily be obtained or worked by dividing a portion of the profits with the owner. I send a specimen of this coal.

(8) Three miles from the above mine is a well-known coal mine named Ch'ia Tsi Te, said to be one of the best mines in this province. It has just been bought by a Mr. Yü, said to be from Canton, for the sum of 87,000,000 small cash (say, \$4,500 gold). This gentleman paid down 300 taels of silver (\$240 gold) to hold the contract and promised to return in one month and pay the difference. If he does not return in that time, he will lose the 300 taels. It is said that the mine was bought for the Germans.

(9) In Ning Yang County, 44 miles southwest of Tai-an-fu, near Lwan Sir Yea, is a copper mine. It was worked a little while, until the people began to quarrel over the ore, and the governor of the province ordered the mine closed. Quite a number of specimens of this mine are now in the Ning Yang court-house. The mine can be opened only by permission of the governor.

(10) Also, in Ning Yang County, 30 miles from Tai-an-fu, is a small mountain called "Tan," where gold has been found. There is a thin vein of gold near the foot of the mountain, said to be 7 miles long. The Chinese get some gold from it after large rains. Fearing disagreement, the magistrate will not allow any extensive mining done. At several places near here, I have seen men by small streams hunting gold and silver, and they told me they could make a living that way. Foreign methods of working would perhaps have good results.

(11) In Chang Ch'ou Hsien, two-thirds of a mile southeast of Pu Tswen Tswang, 60 miles northeast of Tai-an-fu, is a new mine opened about a year ago. One shaft was dug, and coal was found at 252 feet. It was 5 feet 2 inches thick, and in thirteen layers of different thicknesses and grades. The bottom layer is said to be the best, and I send a specimen of it; also one of the first layer. Coal is found in all directions for some distance from this shaft. During the past rainy season, the mine was filled with water, and the owner, not having money enough to put it in order, has been compelled to discontinue mining.

(12) Also, in Chang Ch'ou County, 17 miles south of Chang Ch'ou City, at Wang Ha Tswang, is a good coal mine now being worked with success. This mine is 67 miles from Tai-an-fu.

(13) Also, in Chang Ch'ou County, at Won Tsu Tswang, is a mine that has been worked for some years. I learn that the results of seven years' mining has been coal worth 200,000,000 small cash (about \$100,000 in gold).

(14) In Won Shang Hsien, 57 miles southwest of Tai-an-fu, at Pang Gar Low, on Gin Chea San, is a gold mine which was worked forty years ago, and a number of

large lumps of gold were found. The people fought over the gold, and the officials ordered the mine closed. It can only be opened by permission of the governor.

(15) In Boa Shan Hsien, at Yen Sen Dren, 67 miles east of Tai-an-fu, is an excellent coal mine now being worked; and I hear it produces 2,000,000 cash (about \$1,000 in gold) worth a day.

(16) In Tung Ah Hsien, 60 miles west of Tai-an-fu, at Gaw Lu Ch'cao Tswang, on an uncultivated clay hill, is a silver mine which was closed by the county official on account of fights over the product.

(17) In Tai-an Hsien, 27 miles east of Tai-an-fu (city), at Pai Ta Tzi, there is said to be a silver mine; but there are doubts about it being a good one. Some silver was found, but it is thought that most of it must be mixed with other ore, and the Chinese have no way to separate it. I send you a specimen. This mine was closed by order of the county official, in order to keep peace.

(18) In this county, 27 miles southeast of this city, at Whang Chwan Tswang, is a silver mine which was closed by order of the county official; and 27 miles east of this city, at Lu Tung Yea Tswang, is a mine which produced iron. There was so much trouble over the production that the mine was closed. Coal is found and mined near this town, and silver is also said to have been found. I send you a specimen of a stone seen in many parts of this county.*

Limestone is found everywhere and is burned in almost every village. Lime sells for 3 big cash† a catty.‡

The above is all the information I can obtain in regard to mines in this section.

My friend, Mr. Chang, a man of a little means and one very much interested in mines, is anxious that some American who knows about mining should visit here. He says to tell you he will be glad to show you all the mines in this section and help you in any way you may wish. He is a man of learning, and stands well among the upper class of Chinese.

TAI-AN-FU, January 16, 1899.

HINDRANCES TO BRITISH AND AMERICAN TRADE IN CHINA.

Consul Fowler sends from Chefoo, under date of February 6, 1899, a newspaper containing the memorandum of the British China Association and an account of the proceedings of the American Association at its first meeting.

The British memorandum, it is stated, was drawn up by the committee in deference to a suggestion by Lord Charles Beresford that the association would strengthen his work by circulating a statement of its views upon the present situation in China as affecting questions of trade and commerce. The memorandum begins by attributing the slow progress made in the development of foreign trade with China to three main reasons, namely: (1) The entire absence of good faith on the part of China in the matter of treaty obligations; (2) the absence of security for the investment of foreign capital in China anywhere outside of the treaty ports; (3) the general apathy

* Good galena.

† 1,600 big cash = \$1 in United States gold.

‡ 133½ pounds.

and want of knowledge which has in the past been displayed regarding Chinese affairs. As an illustration of the absence of good faith on the part of the Chinese Government, the failure of the transit-pass system is cited. So long ago as 1858, provision was made in the Tientsin treaty that on the payment of an extra half duty, transit passes could be obtained under which imports and exports could be transported to and from the interior exempt from all further inland charges whatever. The memorandum says that these privileges are universally ignored and exist only in name, the additional taxes levied by local officials on the goods throughout the Empire causing a practical stoppage of trade in many directions.

France and Germany, it is pointed out, have of late been more successful in enforcing their treaty rights. The British China Association thinks that the only way to obtain satisfaction is to deal with abuses where they occur and face Peking with the fact of grievances already redressed. Speaking of one of the most recent concessions—the right to navigate inland waters in China—the memorandum points out that the permission is utterly futile, so long as liberty of residence for purposes of trade is withheld, except at the treaty ports. It is obvious, says the memorandum, that for the protection of merchandise transported by foreign craft under foreign control, there must be established upcountry stations and depots where foreigners or their agents can reside, for the management of the traffic and for the storage and delivery of goods. Other restrictions on the concession likewise limit its value.

In regard to the second obstacle to trade, the British Association says:

It is the want of security which is the main reason for the slow development of foreign trade with China; and the increased dangers involved in the present situation are not only sufficient to check any attempt at extension of enterprise, but are also a serious menace to the trade which already exists. The revenue of the imperial maritime customs, of which the provinces have in the past received their share, is now practically wholly hypothecated for the service of the foreign loans; concurrently with this, the demands from Peking for more money from the provinces are increased. What can be the result, other than an increase of inland taxation? As one means of supplying the deficiency in her revenue, China has given notice of revision of the existing foreign customs tariff. Foreign traders in China are generally favorably disposed towards a revision of the tariff in China's favor; but they at the same time most distinctly demand that no such concession shall be granted, unless full security be given for the protection of foreign trade in the interior against the abuses experienced in the past.

China's financial necessities, brought about by the disaster of her war with Japan and the obligations which she has in consequence incurred with European countries, make it plain that a continuance of her policy of exclusion and contempt for foreign ways can no longer be maintained. Pressure from without, powerfully aided by an empty exchequer within, has already persuaded her so-called rulers that the vast natural resources of the country can no longer be permitted to remain

undeveloped; and in consequence, there are now put out to the world huge schemes of railway and mining enterprise, for the carrying out of which foreign capital is invited. It may, however, be taken for granted that before responding to the invitation the capitalist will pause to look into the security which is offered; he may reasonably ask:

What power has the Central Government in Peking to protect concessions granted in the provinces? What has been the experience in the past as to China's good faith in the matter of treaty engagements and contracts? What amount of foreign control and supervision is to be allowed in the expenditure of the capital asked for? Is the present prohibition of foreign inland residence to be relaxed, in order to enable foreign supervision of foreign inland enterprise? It is clear that in the answering of these questions is involved the further one, Is this much-talked-of opening of China to be made real, or is it a sham? If it is to be made real, it is plainly necessary that strong foreign influence must be used to prevent repetition of the chicanery of the past. No security can be looked for, except such as may be found in the establishment of a Government at Peking which is not only strong, but which is in sympathy with the wishes and feelings of the nation at large, and, we believe, a first necessity if China is to be saved from partition. Signs are not wanting, indeed, that partition has already begun. The policy pursued by Russia in Manchuria is plainly aimed against China's sovereignty in that province; and in the regulations recently issued by the bureau of mines and railways, it is significant to note that it is expressly stated that they are not to have effect in Manchuria or in the province of Shantung. It is not explicitly admitted, but the inference is clear that already these regions are withdrawn from the field where British capital may be invested on equal terms with those given to other nations. On the question of progress and reform, we believe that the new teachings have been widely accepted throughout the Empire, and we can not but think that in fostering and guiding this reform movement Great Britain would be following a policy worthy of herself and of her best traditions. It is plain that wholesale administrative and fiscal reform is imperative, both for the salvation of China herself, as well as for the security of the foreign capital which she is inviting for the development of her resources. Suggestions as to methods of reform do not fall within the scope of this memorandum; suffice it to say that the practical side of the question has not been neglected by this association, and it may be fairly claimed that the British Government has received from its ministers, consuls, and merchants a sufficiency of facts, opinions, and suggestions from which a definite and resolute policy might long ago have been deduced. The future of our relations with China may safely be gauged by the experience of our relations with China in the past. Nothing has ever been gained from China except through pressure, backed by force, and nothing ever will be gained from her except by the same means. Great Britain is to-day looking with some anxiety for new fields for her exports; no finer field in the world exists than in China. Other nations also are equally anxious for peaceful development of the vast commercial possibilities of this country. Let the nations who are so interested and whose aims are not territorial aggrandizement join together in exerting the necessary pressure for reform, through which alone the required security for trade can be found, the integrity of the Empire maintained, and the door of trade kept open to all on equal terms.

We say, then, that the one thing wanted for the development of trade, for the

* Whilst writing, practical demonstration is received of the power of the Chinese authorities to protect new enterprise. We learn to-day that a riotous mob has destroyed the works in connection with the opening of a mine in the Ningpo district (comparatively close to Shanghai), and that the European manager barely escaped with his life. No doubt, the matter will be made one of representation to Peking. Prompt and decisive action on the spot would be more to the point.

protection of capital, and for the extension of enterprise in China is security; and we say that such security must be sought in fiscal and administrative reform of the country, which can only be effected through pressure from without; and we further say that the vast preponderance of British interests in China clearly demands that Great Britain shall lead and guide the movement. We attribute the hitherto neglect of the China question by our Government and the policy of drift into which we have fallen to a mistaken estimate of the strength of British prestige in the Far East, coupled with a fallacious belief in the power of China herself. Other nations, newer in the field and comparatively unhampered by traditions of the past, have seemingly been better able to interpret events in the light of common experience, and have found opportunity in our complaisance and inactivity to exploit the situation to our disadvantage. We do not wish to concern ourselves with any imperfectly understood catch phrases, such as "open door" or "sphere of influence," further than to say that Great Britain's sphere of influence should be wherever British trade preponderates, with the door open for equal trading opportunity to all. This is an ideal which can never be reached without resolute determination on the part of the British Cabinet to lead and not to follow in Peking. We do not hide from ourselves the difficulties which must be faced in order to bring about China's reform; and we therefore urge that Great Britain, in leading the movement, should endeavor to obtain the cooperation of other great nations who have like aims and interests with ourselves.

The American Association of China has for its objects and purposes:

(1) To foster and safeguard the trade and commercial interests of the citizens of the United States and others associated therewith in the empires of China, Japan, and Korea and in the Philippine Islands and elsewhere in Asia or Oceania.

(2) To secure the advantages of sustained watchfulness and readiness for action which will accrue from united and permanent organization in all matters relating to Asiatic trade or legislation or treaties affecting the same.

(3) To provide for convenient ascertainment and distribution of information affecting the interests of its members; and,

(4) Generally to promote a beneficial acquaintance and association of those having interests and pursuits in common concerned with such trade or commerce.

The president of the association, Mr. Haskell, in a letter to the American-Asiatic Association, a printed copy of which is sent by Consul Fowler, says that the importance of the China trade is inadequately appreciated by the mass of Americans. Imports of cotton goods from the United States have increased in the last ten years no less than 121 per cent in quantity and 59½ per cent in value,* and now represent 33 per cent of the total value of such fabrics imported into China. Of this trade, from 85 to 90 per cent finds its consuming markets through the northern ports of Tientsin, Niu-chwang, and Chefoo,† or within the area where recent operations of European powers have been conducted. It is to conserve this trade that efforts of the American association will be directed. After cotton fabrics, kerosene oil is the most important article of export

* See CONSULAR REPORTS No. 223 (April, 1899), p. 560.

† See CONSULAR REPORTS No. 215 (August, 1898), p. 575, and No. 221 (February, 1899), p. 286.

from the United States to China. During the ten years from 1887 to 1897, exports increased from 13,613,000 gallons to 48,212,505 gallons. In other articles of American origin, such as flour, lumber, raw cotton, iron, and steel, there is a promising trade.

After referring to recent concessions to foreign countries, which appear to menace United States trade, the letter says:

The favored-nation clause in the treaties between China and civilized powers insures equal privileges to all. The claims to which we have adverted are in direct contravention of the treaties, but China at this critical juncture is helpless either to protect herself or to effectively secure the observance of her treaty obligations.

HOW TO DEVELOP TRADE WITH CHINA.

In reply to inquiries from a Chicago correspondent,* Consul Wilcox writes from Hankau, January 28, 1899:

In my opinion, the time is ripe for the United States to develop trade with China. Other nations are sending travelers all over this Empire to learn what are the productions and needs of the various provinces, and how best to secure their share of trade.

I think the establishment in four or five of the leading commercial cities of China of expositions in charge of experienced business men who know the ways and language of the country is the best plan yet offered. Thirty years ago, there were a large number of such men, citizens of the United States, engaged in business in China, but to-day they are few. The English, Russians, Germans, Japanese, and French conduct their trade here to a great extent through men who possess the above requirements. There are now a large number of Americans visiting China representing various trade organizations in the United States. These representatives visit the ministers and consuls and request them to get dates for interviews with the Tsungli Yamên at Peking, the viceroys, and other high officials in the various provinces of the Empire. Their plans are similar, they are all from the United States, and they request the Tsungli Yamên to instruct the viceroys to gather specimens, to be sent to the association they represent. Of course, each commission informs the officials that his league is composed of the most prominent and wealthy commercial men of his country. The consequence is that the Chinese officials, by having so many associations brought to their notice, are confused.

They have not the time or inclination to assist all, and, while they will promise to do many things to help the enterprise, they give little or no attention to the matter. If all these associations in the United

*To whom Advance Sheets have been sent.

States that are working to the same end and wish to accomplish the same purpose would unite into one organization, they could and would accomplish wonderful results. Business is not done in the same manner in China as it was thirty years ago, when it was virtually in the hands of foreigners. During these years, the Chinese have become educated in the manner of conducting commercial enterprises, and to a great degree have wrestled the trade from the foreigners and carry it on themselves.

SHOES IN CHINA.

The following is the substance of an article which appeared in the *Leipziger Tageblatt* of March 10, 1899:

China is, at the present time, a country with which all commercial nations are endeavoring to establish trade relations, and Germany, since its acquisition of Kiao-chau, is in the lead in the struggle for commercial supremacy.

There is no doubt that the Chinese Empire, with its enormous population, offers a splendid field for exporting many of the products of this country. The question arises whether or not shoes are among those articles which can be profitably imported into China. Trials should be made in this direction, by all means; for what ground is not covered by Germans, the English and Americans will take at once.

Of course, it must be remembered and seriously considered that the Chinese, as a nation, have a distinctive clothing for the feet; but there is no reason why we can not make the kinds of shoes and after the patterns desired. Again, it is to be expected that through the influence of Europeans, who are constantly increasing in numbers in China, European foot wear will come into fashion.

Already, there are a number of firms in China which import German goods. They have their own branch houses in the large commercial centers, and several of them have established agencies in Germany. Through the medium of such firms, the experiment of exporting shoes to China could be tried without great difficulty or expense. It may be that there is a large business to be done in this line; at any rate, an earnest and fair trial should be given.

The newspapers of this country, undoubtedly inspired by the chambers of commerce, are urging the merchants to exert themselves to obtain a firm commercial hold in China in almost every line of goods, with the result that Germany, within the past year, has increased her exports thither enormously.

This morning, I had occasion to call upon several parties who had just returned from China, one of whom had the following to say about the shoe trade in that country:

I am very certain that any attempt on the part of the manufacturers of Germany or of America to manufacture Chinese shoes to be imported into China would prove a failure, because of the prevailing low prices for which such articles are sold in that country. A good substantial pair of Chinese shoes can be purchased for what would amount to about 20 cents in American money. In a very large number of Chinese families of the poorer classes, the shoes for the entire

family are made by the wife and mother. The Chinese are slow to adopt foreign customs and habits, and I am sure it will be many years before they can be induced to wear our shoes. Of course, as the newspaper article says, the foreign population in China is growing very rapidly from year to year and should be taken into account. It would certainly be a good idea, in view of this, for shoe manufacturers to pay careful attention to the Chinese markets, for the purpose and with the aim of extending their trade. American shoes are well known in China. They are sold there to some small extent through English houses, and, were it not for the very high prices which are asked for them, many more would be sold.

It has been proven by our shoe manufacturers that they can compete with those of any other country as regards price and quality, and for this reason they should watch very carefully for openings in foreign countries where there is any likelihood of their products being sold.

Another point: Our exporters should be careful to see that the retailers have a uniform price for their shoes, and that it should not be excessive, as is sometimes the case. Dealers in American shoes in foreign countries give as an excuse for exorbitant charges the fact that they have so little call for them. Remedy this fault and our shoes will become very much more popular than they are to-day. Exporters of shoes and leather goods, in preparing shipments for China, should remember to pack so as to suit the climate.

BRAINARD H. WARNER, Jr.,

LEIPZIG, *March 11, 1899.*

Consul.

FLOUR IN CHINA.

In answer to a Minnesota correspondent,* Consul-General Goodnow writes from Shanghai, March 9, 1899:

The flour imported into China was valued at 1,505,653 taels (\$978,673)† in 1896, 1,221,516 taels (\$793,985) in 1897, and 1,774,712 taels (\$1,153,562) in 1898. I would estimate the weight in 1898 at 59,000,000 pounds.

The advance in the price of flour has materially checked its use. The small cakes used by the lower classes are now made almost entirely of rice flour, and only varnished over with wheat flour. A return to the average value of wheat in the United States and to the average rate of freight from the Pacific coast to this point will result in a very large increase in the use of wheat flour here.

Most of these people are poor beyond our understanding, and wheat flour is a luxury to them just as it was to our forefathers,

*To whom Advance Sheets have been sent.

† The consul-general values the haikwan tael at 65 cents. According to estimates by the United States Director of the Mint, the average value in the three years was: 1896, 81.1 cents; 1897, 73.9 cents; 1898, 69.4 cents.

and not a necessity as it has grown to be to us. Its use is instantly lessened by a rise in price.

The increase in 1898 and 1897 is not an increase of consumption by Chinese. A large proportion has gone to the new garrisons of foreign troops at Port Arthur, Weihaiwei, and Kyao-chau, and to the foreign men-of-war now on this coast. On the other hand, the local mill at Shanghai sold last year nearly 10,000,000 pounds of flour. This enters directly into competition with flour from the United States. While Shanghai flour is slightly darker, it sells (wholesale) at \$1.85 in Mexican currency (87 cents in United States currency)* for 50 pounds. American flour is sold at \$2 in Mexican currency (94.4 cents) per 50 pounds.

The present difficulty in importing flour is in the matter of trans-Pacific transportation. There are more freights offered than boats to carry them. Consequently, the rate now is \$8 Mexican (\$3.78 United States) per ton from San Francisco to Shanghai, an increase of \$2 Mexican per ton over the rates prevailing two years ago. When this high freight rate was united to a high price of wheat in America during most of 1898, flour wholesaled here at 5 cents Mexican (2.4 cents United States) per pound. To-day, the wholesale price is 4 cents Mexican (1.89 cents United States) per pound. When we have sufficient ships in the Pacific for the demands of the trade, the lessened freight rate will lower the wholesale price of flour here, and increase its consumption.

HEMP-WORKING MACHINERY IN NEW ZEALAND.†

In reply to instruction directing me to report regarding a bonus, or prize, offered by the New Zealand Government for an improved *Phormium tenax* machine for the native flax of this country, I beg to state that this matter has been thoroughly investigated by me, and several letters have been written to parties in the United States who have asked for information. I am told that the time has lapsed during which the bonus for improved machinery for working hemp was offered, but (semiofficially) I am informed that anyone able to furnish a really satisfactory machine or method for dressing flax could very likely make such terms with the New Zealand Government as would lead to his receiving an equivalent of the bonus originally offered.

I do not think it will be worth while to attempt to lay down New

* Taking the valuation of the Director of the Mint, April 1, 1899, \$1 in Mexican currency = 47.2 cents in United States currency.

† This report was obtained at the request of a resident of Washington, who has received a copy.

Zealand hemp in a raw state in any American city, because I believe it takes about 7 tons of the raw material to make 1 ton of the dressed; and therefore, unless the article could be dealt with here, I think there would be poor prospects of building up a trade.

Under date of November 1, 1895, the Department of Agriculture for New Zealand issued a notice (No. 430) for a bonus of £1,750 (\$8,516) for a machine or process for dressing New Zealand hemp (*Phormium tenax*) which should be an improvement on the machines or processes then in use, and which should, at the trial, be found to materially reduce the cost of production, improve the product, or increase the quantity of dressed fiber. All applications were to be addressed to the Minister for Agriculture, Wellington, to reach him not later than December 31, 1897. They were to be accompanied by a description, particularly stating improvements on present machines or processes, and also the cost at which the machine or process could be supplied; the machine or process was to be submitted to examination, at such time and place as the Government might direct, to a committee of three or more experts. The cost of bringing the machine or appliances to the ground from within the colony, supplying the necessary shafting, motive power, and buildings, was to be defrayed by the Government; and, if any machine was sent from beyond the colony, and was awarded the bonus or part thereof, the cost of bringing the same was to be borne by the Government. The committee was to supply a sufficient and equal quantity of green hemp to each machine or process as a test; also, to take into consideration the time occupied in the operation, the cost of labor, and time required after the fiber had left the machine or process before it was ready for baling, the percentage of dressed fiber or tow produced by each machine or process, the cost of producing the same, the cost of the machine, and the simplicity and durability of the working parts. On completion of the test, the committee was to furnish a report to the minister, etc.

The bonus (No. 2) of £250 (\$1,217) was offered for a process of utilizing the waste products of the hemp.

Up to this time, no machine or process has been found which, in the opinion of the committee, seems to comply with the requirements.

FRANK DILLINGHAM,
Consul.

AUCKLAND, *February 15, 1899.*

CANADA'S MINERAL PRODUCTION IN 1898.

A very interesting summary of the mineral production of the Dominion of Canada for 1898 has just been published by the Canadian Geological Survey. The returns are not yet all in, but the pamphlet shows that the output for the year 1898 is considerably ahead of the previous year's record.

Of the total output of metallic products, valued at \$21,622,601, \$13,700,000 was in gold, \$10,000,000 of this representing the yield of the Yukon district. Silver (fine, in ore, etc.) was produced to the value of \$2,583,298. The other minerals were: Copper (fine, in ore, etc.), \$2,159,556; nickel (fine, in ore, etc.), \$1,820,838; lead (fine, in ore, etc.), \$1,206,399; and iron ore, \$152,510.

The output of nonmetallic substances was \$15,884,596, of which coal represented more than half, viz, \$8,227,958. Building material (including bricks, building stone, lime, sand, gravel, and tiles) was valued at \$3,600,000; petroleum, \$981,106; asbestos and asbestic, \$486,227; and Portland cement, \$981,106.

The estimated value of the mineral products not returned is put down at \$250,000, thus bringing the total value of the mineral product of the country last year to \$37,757,197, or \$9,095,767 more than 1897, when the value was \$28,661,430. The following extracts are from the pamphlet:

Compared with 1886, the first year for which statistics were issued, we find an increase in the value of mineral products in thirteen years of nearly 270 per cent. When it is remembered that in the same period the increase in the population has been only about 14 per cent, it will be evident that the proportional importance of the mining industry to the country is very much greater than at the beginning of the period dealt with. Thus, the per capita value of the mineral production of the country has increased from about \$2.20 to \$7.20.

Of the gold output, the main feature was the large increase in that of the Yukon. This accounts for \$7,500,000 of the enlargement, which is three times as great an estimate output as that for last year. With the exception of the gold washings of the Saskatchewan River, in the Northwest Territory, there were increases in all the other districts of the Dominion.

There was an increased output of coal in all the different districts, and a gain of 50 per cent in the output of copper in the Province of Ontario. A rise in the price of this metal makes the proportional increase in value greater than that for the quantity. There has also been an increase in the output of nickel, but a decrease in lead, silver, and asbestos.

URBAIN J. LEDOUX,
Consul.

THREE RIVERS, *March 6, 1899.*

THE FORESTS OF CANADA.

The following extracts are from a report by Consul-General Bittinger, dated Montreal, March 14, 1899. The full text has been sent the Department of Agriculture.

In the days of old, a mighty forest stretched from the ocean that breaks on the shores of Nova Scotia to the Lake of the Woods, something like 2,000 miles, covering a good 350,000,000 acres. The settler has cut his way into the fringe of this vast woodland, but his depredations are as nothing compared with the terrific scourge of fire, which has left millions of scorched and blackened trunks to mark the place where it has roared and destroyed. In spite of all, enough is left to place Canada high among the wood-producing countries of the world. The following table will show the area of the forests in the different Provinces:

Province.	Total area.	Woodland.	Percentage of wood.
	<i>Sq. miles.</i>	<i>Sq. miles.</i>	<i>Per cent.</i>
Ontario.....	219,650	102,118	46.49
Quebec.....	227,500	116,521	51.22
New Brunswick.....	28,100	14,766	52.55
Nova Scotia.....	20,550	6,464	31.45
Prince Edward Island.....	2,000	797	39.85
Manitoba.....	64,066	25,626	40
British Columbia.....	382,300	285,554	74.69
Northwest Territories.....	2,371,481	696,952	29.38
Total.....	3,315,647	1,248,798	37.66

These figures are founded on the most recent and reliable information available.

The quantity of pine is estimated, in Ontario, as 19,404,000,000 board feet; in Quebec, at 15,734,000,000 feet; in the other Provinces, at 2,200,000,000 feet; total, 37,338,000,000 feet. A low calculation of the annual cut is 1,000,000,000 feet, in which case Canada has not more than forty years' supply, and the growth of new wood, in spite of all regulations, is not nearly equal to the cut. It is impossible to give anything like a just return of the spruce limits, estimates being so diverse as to be useless.

The great tree of Ontario is the white or Weymouth pine. There are also the red pine, spruce, hemlock, etc. The valuable black walnut, tulip, plane, and coffee trees are almost extinct. The quantity or value of timber can not be given, as many millions of acres are utterly unexplored. In the known woods, a return to the Ontario Government states that there are 60,410,000,000 feet.

Quebec, with its newly added territory, is now an even larger Province than Ontario. Vast regions to the north are unknown. The white pine is the most important tree, as in Ontario; it is however, rapidly disappearing. Rich spruce is noted in Bonaventure River au Bouleau, Chicoutimi County, River French, and Bay Lake. There is great waste of hemlock, on account of its bark.

Some of the best cedar areas of the country are on the north shore of New Brunswick. An unsurveyed area of some 2,000,000 acres on the Upper Restigouche is reported to be full of good spruce and cedar. The pine forests, at one time rich, have been greatly impoverished. The same is true of Nova Scotia. A quantity of good spruce is left in the last-named Province, but it is being used in a similar way.

British Columbia may be said to possess the largest compact timber resources in the world. Only the fringe has been cut. It is estimated that the Douglass pine, cedar, spruce, Alaska pine, etc., standing in the railway belt, amount to 25,000,000,000 feet, worth \$25,000,000. The coast is heavily timbered as far north as Alaska. There is no white pine, but spruce attains perfection in this section.

The following table shows the area in forests in various countries of the world:

Country.	Area in forests.	Percentage of total area.
<i>Europe.</i>		
<i>Austria.....</i>	<i>Acres.</i>	<i>Per cent.</i>
Austria.....	24,172,360	32.58
Hungary.....	18,777,771	23.52
Belgium.....	1,243,507	17.08
Bulgaria.....	3,291,100	12
France.....	23,466,450	17.92
Germany.....	34,347,000	25.70
Greece.....	2,025,400	12.60
Italy.....	10,131,235	14.31
Norway.....	19,288,626	24.53
Portugal.....	1,163,841	5.25
Roumania.....	4,942,000	15.22
Russia.....	498,200,000	37.15
Servia.....	5,763,163	48
Spain.....	16,354,941	13.03
Sweden.....	44,480,000	40.65
Switzerland.....	2,259,018	20.12
Turkey.....	3,500,000	8.03
United Kingdom.....	2,695,000	4
<i>America.</i>		
Canada.....	799,230,720	37.66
United States.....	450,000,000	23.29
British Guiana.....	5,760,000	18
<i>Asia.</i>		
India.....	140,000,000	25
Turkey.....	17,500,000	.....
Japan.....	28,700,000	30.24

Canadian exports of forest products in 1897.

Description.	To United States.	To Great Britain.
Bark for tanning.....	\$112,154	.....
Firewood	173,799	.....
Logs, all kinds.....	2,099,777	\$30,300
Lumber:		
Pine deals.....	.....	3,309,450
Spruce and other.....	315,746	6,513,224
Deal ends.....	2,151	628,110
Planks and boards.....	8,612,283	961,357
Laths, palings, and pickets.....	500,361	7,224
Joists and scantling.....	212,245	113,448
Staves and headings.....	643,127	48,491
All other.....	240,174	76,119
Shingles.....	1,184,279	.....
Sleepers and railroad ties.....	221,929	7,861
Stave bolts.....	38,634	.....
Boa shooks, etc.....	18,037	38,546
Timber:		
Square oak.....	.....	538,926
White pine.....	2,225	1,350,204
All other.....	24,222	474,388
Wood for wood pulp.....	677,221	33,931
Manufactured.....	305,244	50,831
Wood, manufactured:		
Household furniture.....	30,151	68,014
Doors, sashes, and blinds.....	1,288	273,989
Matches and match splints.....	4,072	136,384
Wood pulp.....	576,720	164,138
All other.....	109,375	276,888
Total manufactures.....	1,715,792	.....
Total manufactured and unmanufactured..	33,046,329	.....

Export of forest products per province for fiscal year.

Province.	Total.	To United States.	To Great Britain.
Ontario.....	\$10,022,602	\$9,051,093	\$54,390
Quebec.....	11,587,158	2,834,424	8,360,575
Nova Scotia.....	2,508,963	581,396	1,445,100
New Brunswick.....	6,388,014	2,031,054	4,054,528
Manitoba.....	48	48	.....
British Columbia.....	742,119	331,564	144,058
Prince Edward Island.....	5,645	.....	934
Northwest Territories.....	4,180	4,180	.....

COAL IN NEW BRUNSWICK.

It is known that many thousands of dollars have been expended in prospecting and developing the oil deposits at Baltimore mines, in Albert County, New Brunswick. This enterprise has not as yet yielded a paying percentage upon the investment, and the oil works at this place have been abandoned. Westmoreland County is to be the scene of the next operations in the search for oil.

An agent sent here by New York capitalists believes, however, that the oil is but a by-product of a more valuable mineral, which exists in almost unlimited quantities. Ever since the prospecting for oil began in Albert County, it has been known that coal, or shale, as it is called, was found abundantly. So engrossed were the oil men in their enterprise that they paid little attention to what is now believed to be one of the most valuable coal deposits ever discovered.

The quality of the coal is said to be superior to the best Scotch cannel coal for some purposes. It is particularly valuable for mixing with other coal for the production of illuminating gas.

An engineer who was sent by the promoters to look over the ground estimates that 200,000,000 tons of the coal are in sight. The depth and extent of the deposit has not yet been tested. A company will organize immediately, the capital stock to be about \$1,000,000.

The nearest railway point to the deposit is the Harvey and Salisbury road, 8 miles distant, which connects with the Intercolonial Railway. The company will either purchase the Harvey and Salisbury road or build direct to the Intercolonial Railway, a distance of 16 miles. The company will also need a water front and may make Moncton their shipping headquarters.

By next fall, the company expects to be shipping 1,000 tons of coal a day from their mine, and in a year from now it calculates that the output will be 3,000 tons a day, and that the enterprise will give employment to 2,000 men.

GUSTAVE BEUTELSPACHER,

MONCTON, *March 31, 1899.*

Commercial Agent.

NOTES FROM THE YUKON.

The weather for the past three months has been a pleasant surprise to the people who have spent their first winter here. The coldest weather we have had was between the 8th and 15th of November, the thermometer registering 40° to 50° below zero. The month of December was ideal winter weather, the thermometer then only registering around zero, and there being no wind, so to speak, the air was as pleasant as in November weather in the Middle States. In January we had a couple of weeks of very cold weather, but nothing to be dreaded when one is warmly clad, with the extremities of the body well protected against frost bites. While there have been a great many cases of frozen limbs, and amputation is sometimes necessary, such cases mostly came from long-continued exposure on particularly cold days, or from exhaustion, or getting the feet wet on stampedes.

Stampeding to relocate claims where owners failed to do the

necessary representation work, or to some reported locality said to be good, has been very frequent all winter. The majority of such stampedes, however, proved failures; for instance, on the first week of January, a stampede took place from Dawson down the Yukon River, on which some three hundred men and women started at midnight, among whom were some well-known rich mine owners, who would not be expected to go out stampeding unless they had some information of a positive character. Anyone who could get a dog or two and a sled and some provisions together started. After traveling all night, a council of war was held by those who were in the secret of the coveted locality. Heads were counted, and, finding there were more in camp than there could possibly be claims to stake, the leaders concluded not to go farther, but to starve out those who had brought only a few days' provisions along. Many came back to Dawson for more provisions, and started off again in the effort to regain their former position. Finally, the leaders made an onward movement up creeks, across divides and hills, and, having to make new trails in the snow, unfortunately lost the proper direction to the supposed goal. They had, therefore, to beat a retreat to Dawson, returning footsore and weary, and many with frosted limbs, after a week of fruitless search. There have been, however, some successful relocations of good claims this winter, which will pay the possessors handsomely for all the trouble and hardships they have undergone.

The winter here as a whole, in my judgment, is preferable to summer, as traveling over the creeks and trails is much easier. It is not an uncommon occurrence for one to travel from 50 to 60 miles in a single day with a couple of dogs, starting at daylight and completing the trip the same evening. In summer, one must traverse bog and morass, wade through streams, and frequently get into muck up to the waist, in going from here to the diggings on Dominion and other creeks. The freighting of necessary provisions is much easier in winter, with the assistance of dogs, a couple of which can easily pull from 500 to 800 pounds on a sled. In summer, the load would have to be packed on the backs of mules or bronchos, making locomotion much more expensive and slower.

The sun was lost sight of in Dawson on the 5th of December, disappearing from view behind the hills and not reappearing again until the 7th of January. On some of the creeks, some 15 and 20 miles from here, where the hills rise abruptly from the streams, the sun was lost sight of in the first week of November.

The temperature on the creeks is generally about 10° warmer than here, from the fact that Dawson is more in the open and is exposed to drafts of winds.

The darkness of winter days, like the coldness of this Arctic region, has been very much exaggerated. There has been good daylight

from 9 a. m. to 3 p. m.; of course, in offices and stores, lights had to be burned all day, with the exception of a couple of hours at mid-day. This happily lasted but a couple of weeks; at this date, we have daylight from 6.30 in the morning until 5.30 in the evening. In a couple of months, we will have daylight all the time.

The extremely moderate weather for this region has had the effect of reducing the price of wood from \$35 to \$15 per cord; last year, the average price was \$60 per cord. This weather has also caused many of the miners to suspend work on the creek claims for a time, on account of the water coming into the shafts where tunneling or drifting had to be done. On one claim on Victoria Gulch, a spring was struck that overflowed and flooded all the mines in that vicinity for three-fourths of a mile.

There is a machine for taking water out of the mines on the siphon principle, which works very effectively. This apparatus also acts as a thawing machine, and is now coming into practical use by owners of claims. There are about twenty of the machines in successful operation here—all that can be obtained at present. Hundreds of similar machines can be advantageously used in summer time for thawing ground and pumping water where drifting has to be carried on. By this means, miners can be enabled to work their ground continuously winter and summer. When one considers the vast expanse of territory both here and in Alaska rich in gold deposits, it will be seen that there is an excellent opening for such machines.

Many people who have had "lays," or leases, on claims, and who failed after a couple of months to find sufficient to pay, have quit and gone out over the ice; a goodly number have turned their faces toward Alaska. To those who have means to subsist for a couple of years, Alaska will be found after all to be the poor man's mining country, as, when one finds ground there, he gets sufficient of it—20 acres—to warrant his staying. There is a vast extent of placer mining ground in Alaska where a man can get out, with a pick and shovel, 1 to 4 ounces of gold per day. Great fortunes could be reaped by companies who would buy up mining ground already located in Alaska and introduce modern mining machinery. Forty-Mile District, Seventy-Mile District, the Tanana District near Circle City, and others are open for such enterprise. It takes capital; but capital, if put in the right districts in Alaska, will be amply repaid. I have before me a reliable list of twelve claims prospected in the Seventy-Mile District, Alaska, all averaging almost 3 ounces of gold per man per day. This territory, with modern machinery, would be most valuable.

J. C. McCook,
Consul.

DAWSON CITY, *February 11, 1899.*

TELEPHONE SERVICE IN CANADA.

The following reports were made in answer to a Department instruction of March 3, 1899. Consul-General Bittinger writes from Montreal, under date of March 15:

The Bell Telephone Company, Limited, covers the Provinces of Ontario, Quebec, and Manitoba, in the Dominion of Canada. The cost for telephone service in the city of Montreal is \$30 for private residences and \$50 for business houses per year. There is no cost for installation and rent. The cost at pay stations in the city is 10 cents for five minutes.

The telephone is first located by the company where the subscriber directs; if afterwards the instrument is required to be moved, such removal is done by the company at the expense of the subscriber.

The Bell Telephone Company has a long-distance service in the Provinces of Ontario and Quebec, covering hundreds of stations. Their charges for this service for written messages of twenty words or under are as follows:

	Cents.
Up to 15 miles.....	15
15 to 150 miles.....	25
150 to 225 miles.....	50

Charge for delivery is extra. For each additional twenty words, or fraction thereof, one-half the above tariff is asked.

The Province of Nova Scotia is covered by the Nova Scotia Telephone Company; New Brunswick, by the New Brunswick Telephone Company; Prince Edward Island, by the Prince Edward Island Company; Newfoundland, by the Anglo-American Telegraph Company. The city of Vancouver, British Columbia, is covered by the New Westminster and Burrard Inlet Telephone Company; Victoria, by the Victoria and Esquimalt Telephone Company.

Consul Sewell, of Toronto, on March 24, says:

The Bell Telephone Company of Canada was incorporated April 29, 1880, second session of the fourth Dominion Parliament, with a capital stock of \$500,000. Only limited rights were granted to manufacture, but the act gave the company the privilege of taking stock in manufacturing concerns. On the 17th of May, 1880, the original incorporation act was amended, and by this amendment the company was granted privileges to manufacture telephones and all other appliances connected therewith.

On March 10, 1882, an act to confer certain powers upon the Bell Telephone Company was assented to by the Ontario Government, and privileges in relation to the erection, construction, and maintenance of their system were granted. On July 9, 1892, an act was assented to by the Dominion Parliament, granting the Bell Telephone Company power to increase its capital stock, not to exceed \$5,000,000, including the original stock.

It was also provided in this act that the issuing of bonds and debentures from time to time should be limited to a sum not exceeding in the whole \$500,000, and that the then existing rates should not be increased without the consent of the governor in council.

By the original act of incorporation, the Bell Telephone Company was allowed to operate in every municipality in the Dominion. The act did not grant it an exclusive right; the system, however, to-day practically controls the telephone business throughout the Dominion. By an act passed July 23, 1894, the company was given the power to issue bonds or debentures to the amount of 75 per cent of its actual paid-up capital. In 1891, capitalists in Toronto combined and applied to the city council under the name of the Toronto Telephone Company for the privilege of constructing and operating a telephone system in Toronto. As soon as this proposed company had made an offer to the city of Toronto, the Bell Telephone Company, realizing that the offer might be accepted, immediately made counter propositions to the city authorities, greatly reducing the previous rates and granting the city a percentage on all its gross earnings within the municipality, in exchange for the exclusive privilege of operating in Toronto for five years, and other considerations. The agreement entered into between the Bell Telephone Company and the city corporation was substantially as follows:

The corporation agreed that it would not, during a period of five years, give to any person, firm, or company permission to use any of the streets or lanes of the city for the purpose of placing in, upon, or under such streets or lanes any poles, ducts, or wires for the purpose of carrying on telephone business, the Bell Telephone Company agreeing to pay to the city on December, March, June, and September 1 of each year 5 per cent of its gross earnings for telephone service within the city limits or any extension thereof, not to include the receipts for business transacted between the city of Toronto and the offices outside the city. The company further agreed that the rate to be charged for leases of telephones—to wit, dwelling houses within the city limits for one year or more—should be \$25 per annum; similar leases for business houses, \$45 per annum; such rates to apply to all telephones then in use, as well as to those leased during the period of the said contract. A pro rata rebate for the unex-

pired term was granted for telephones in use at the time of the making of the said contract on which rent was paid in advance. The company agreed to place its wires under ground as rapidly as possible, with the exception of lines on small back streets, required for distribution purposes. The company further agreed not to allow any other person or company to use its poles without the consent of the city engineer and the approval of the council, except where the company has already existing contracts covering the use of poles. It also agreed to furnish the city with one duct from the conduits constructed in any of the streets, etc., to be used for the city fire-alarm service, making no charge therefor, and to give the city free of cost the use of any of its poles, when required, for the fire-alarm system. The company agreed to provide efficient telephone service, with all modern appliances, including metallic circuits, to the satisfaction of the city engineer.

The Bell Telephone Company and the city of Toronto continued to act under this agreement for the period of five years, and at the expiration of the contract, the company would not renew the agreement, and now declines to allow the city any percentage upon its gross receipts; so that at the present time, it is operating under the rights conferred by the statute. The rates provided for in the agreement are charged. The system in Toronto consists of a main station and two exchanges, the single-wire system having been changed in 1892 to the double-wire metallic system. After the agreement was signed, all the lines in the central district were laid under ground, and $4\frac{1}{2}$ miles installed and substantially covered by asphalt pavement. In almost every case, the installation of under-ground work preceded the laying of the asphalt. During the period of the agreement between the telephone company and the city of Toronto, the following sums were paid to the city treasurer:

Year.	Amount.	Year.	Amount.
1891 (2 months).....	\$1,172.46	1894	\$7,883.42
1892	7,303.43	1895	7,999.98
1893	7,455.67	1896 (10 months).....	6,791.78

These represented 5 per cent of the gross earnings of the company during said five years.

Previous to 1891, the rates to subscribers were \$50 for business houses and \$30 for private telephones. From September 17, 1891, to the present time, the rate of \$45 and \$25, as per expired agreement, has not been changed. The present number of subscribers within the city is 8,300, with an average daily call of 13.02. Rates

for long distances are charged according to a sliding scale, 25 cents being the lowest figure for five minutes' conversation. Direct telephonic communications can be had with the principal cities, towns, and villages in the Provinces of Quebec and Ontario and the United States. Up to 15 miles, rates are 15 cents; from 15 to 150 miles, 25 cents; from 150 to 225 miles, 50 cents. For each additional 20 miles or a fraction, half of the above tariff is charged. The telephone company, from 1880 to 1898, had plant in Toronto "which does not include lands and buildings, or \$306,220.21, the value of useless and ruined material which was not counted during its time," which appears to be worth about \$1,000,000.

The services rendered by the company are first class, and all materials and equipments are in excellent condition in every particular. According to the directors' nineteenth annual report, 1,637 new subscribers were added during the last year, the total number of instruments now earning rental in the Dominion being 32,082. The company operates 343 exchanges and 340 agencies. Six hundred and sixty-six miles of wire have been added to the long-distance lines in 1898; of these, 326 miles are in the Ontario department and 340 miles in the eastern department. Long-distance lines now owned and operated by the company comprise 17,233 miles of wire on 6,096 miles of poles. During the year 1898, there were divided among the shareholders at par 7,920 shares of new stock, in proportion of 1 share of new for 4 of old, all of which, with the exception of 160 shares, were sold and the premium divided pro rata.

The stock of the Bell Telephone Company of Canada now sells readily at 178, whenever placed upon the market.

CANADIAN POSTAL CHANGES.

During the past year, many important changes have been made in Canadian post-office regulations and rates. Letter postage within Canada and from Canada to the United States has been reduced from 3 cents to 2 cents per ounce, and the rate between Canada, Great Britain, and thirty-seven different parts of the Empire has been reduced from 5 cents to 2 cents per half ounce.

The special-delivery system has been introduced. Letters bearing a special-delivery stamp costing 10 cents and addressed to the following cities in Canada are delivered by messenger immediately upon receipt: Toronto, Hamilton, London, Brantford, Kingston, Ottawa, Montreal, Quebec, St. John, Fredericktown, Halifax, Winnipeg, Victoria, and Vancouver.

Postage is now chargeable upon newspapers at the rate of one-fourth of a cent per pound, which will be increased to half a cent per pound on June 30 next. What has heretofore been called fifth-class matter will henceforth be known as fourth class, the former fourth class, which embraced packets addressed to places in Canada and closed against inspection, having been abolished. Matter closed against inspection can in future be sent only at letter rates.

Books in raised characters for the use of the blind are now transmitted within Canada free of postage. United States postal cards mailed in Canada bearing a Canadian 1-cent stamp may now be forwarded to any address in Canada or the United States.

The Post-Office of the United Kingdom has made arrangements under which, by the prepayment of an additional fee, parcels as well as letters may be delivered by special messenger immediately after arrival at the office of destination.

H. W. BRUSH,
Consul.

CLIFTON, *March 15, 1899.*

ARGENTINE TARIFF CHANGES.

Minister Buchanan sends from Buenos Ayres, under date of February 15, 1899, copy of the Argentine tariff for 1899. But few changes of importance to our trade, he says, have been made in the "aforos," or custom-house valuations, of articles upon which ad valorem taxes are calculated. One of the most prominent changes of interest to the United States is that reducing the valuation of spruce pine from 35 to 25 cents per cubic meter, the change resulting in a net reduction in duty of \$1.39 gold per 1,000 feet. Mr. Buchanan continues:

The duty and "aforo" on canned fruits and vegetables have been raised this year, in accordance, no doubt, with the demands made upon Congress by the local canning factories. Unfortunately, the general tariff on this class of goods injures articles that might be imported without detriment to local industries. For instance, canned corn and canned strawberries are taxed alike—25 cents per kilogram (2.2046 pounds). The latter product may be able to support this tax; but, as corn is not packed here, canned corn is practically debarred from the market. Another change is that by which tobacco to be used for making sheep dips is passed from the free list to the dutiable at 25 per cent. This change is not yet well understood, and I will report further on the subject as soon as I learn the facts in the case. I give below a list of the greater portion of the changes made by the customs valuations of this year.

Differences in customs valuation of Argentina between the laws of 1898 and 1899.

Articles.	Duty.	Valuation.		
		Unit.	1898.	1899.
	<i>Per cent.</i>			
Black powder.....	50	Kilogram..	\$0.60	\$0.50
Woolen capes.....	50	Each	3.00	5.00
Silk or silk-mixed capes.....	50	do	7.00	10.00
Plush capes.....	50	do	11.00	20.00
Jute or cotton curtains.....	25	Kilogram..	.....	1.40
Woolen blankets.....	25	do .....	.....	3.00
Cotton blankets.....	25	do	1.00	1.20
Table cloth and napkins, cotton.....	25	do	1.00	1.20
Cotton handkerchiefs:				
Up to 70 centimeters.....	25	do	1.00	2.50
Over 70 centimeters.....	25	do .....	.....	.....
Woolen or woolen-mixed cloth for military uniforms.....	25	do .....	.....	1.50
Grass or hemp mats.....	25	do	.30	.40
Violins and violas.....	25	Each	5.00	7.00
Silk-plush hat bodies.....	50	do .....	.....	8.00
Iron or steel electric wire:				
Covered with cotton or gutta-percha.....	5	Kilogram..	.....	.30
Covered with silk.....	5	do .....	.....	2.00
Cotton hemp rope.....	25	do	.15	.17
Cordage, generally.....	25	do	.30	.35
Spruce pine.....	15	Cu. meter..	.35	.25
Walnut, cherry, or oak veneers.....	25	do	.30	.15
Churns and sausage cutters.....	25	Each	2.00	2.50
Sheet lead.....	10	Kilogram..	.08	.10
Iron screws, galvanized.....	40	do	.15	.20
Sheet zinc.....	25	do .....	.....	.20
Barley in packages for coffee.....	25	do .....	.....	.40
Silk-covered wire, other than electric.....	25	do	2.00	1.50
Cotton-covered wire, other than electric.....	25	do	1.00	.80
Ladies' hand bags, leather or felt.....	25	Dozen	12.00	16.00
Ordinary gold or silver plated watch chains.....	25	do	5.00	8.00
Cigar cases and fine pocketbooks.....	25	do	15.00	11.00
Cotton ribbon.....	25	Kilogram..	.80	1.00
Pocket knives.....	25	Dozen	8.00	6.00
Phonographs and graphophones.....	25	Each	100.00	On val.
Key rings.....	25	Kilogram..	.50	1.00
Paper or wood-pulp plates.....	25	do .....	.....	1.00
Pens.....	25	do	3.00	2.50
Bicycles.....	25	Each	50.00	45.00
For children, wheels 60 centimeters and less in diameter..	25	do .....	.....	20.00
Lamp bowls.....	25	Dozen	4.00	2.00
Table lamps, common.....	25	do	1.50	3.00
Kitchen lamps.....	25	do .....	.....	1.50
Lamp bases.....	25	do .....	.....	2.00
Electric table lamps:				
Porcelain.....	25	Kilogram..	.....	.45
Bronze.....	25	do .....	.....	.75
Lactic acid.....	25	do .....	.....	.25
Aniline.....	25	do	2.00	1.50
Medicinal liquors.....	25	Dozen	6.00	.....
Do.....	25	Liter .....	.....	.60
Borax*.....	40	Kilogram..	.15	.20
Quinine.....	25	do	20.00	15.00
Salol.....	25	do	8.00	4.00
Antipyrine.....	25	do	25.00	15.00

* In 1898 the duty was 25 per cent ad valorem per kilogram.

Differences in customs valuation of Argentina, etc.—Continued.

Articles.	Duty.	Valuation.		
		Unit.	1898.	1899.
	<i>Per cent.</i>			
Bromide of ammonia.....	25	Kilogram..	\$10.00	\$5.00
Phenactine.....	25	do	12.00	6.00
Guayacol.....	25	do	10.00	6.00
Morphine.....	25	do	60.00	50.00
Cocaine.....	25	Gram.....	.20	.15
	<i>Cents.</i>			
Confectionery or candy, generally.....	25	Kilogram..	1.00	.80
Canned and preserved fruits*.....	25	do	.30	.30

* In 1898 the duty was 15 per cent specific per kilogram.

THE ORINOCO RIVER.

Minister Loomis sends from Caracas, March 3, 1899, an account of a trip up the Orinoco River and along the north coast of Venezuela on the U. S. S. *Wilmington*. Mr. Loomis says, in part:

The Orinoco River is about 20 miles wide at its mouth and flows over an immense bar, which it took us an hour to clear. The muddy waters of the river project many miles seaward and are noticeable about the time land is sighted. There are no steering marks or lights or light-houses on this coast of Venezuela. The river loses half its width about 50 miles above the Boca Grande; and the banks on either side, very low throughout the delta region, are thickly covered with trees and plants. The tropical vegetation is sumptuously beautiful.

I made a point of stopping wherever there were any considerable American interests near the Orinoco. The first place of this character visited was Manoa, the seat of the Imataca mines. These come out almost to the water's edge at Manoa, which is situated on the Imataca River, about 5 miles above its confluence with the Orinoco. The mines are rich in iron ore of a very desirable quality, and there is at this time a fight over their possession in the Venezuelan courts.

Santa Catalina, an ancient hamlet on the Santa Catalina River, 3 miles from its junction with the Orinoco, is the headquarters of the Orinoco Company, Limited, an American company which has a concession from the Venezuelan Government authorizing it to exploit some 20,000 square miles of territory in the Orinoco Valley. The company has erected a large frame building at Santa Catalina, which it uses as offices and living rooms for its officers. Much work in the

way of research and exploration has been accomplished, but no organized efforts at colonization have been made. The main product from the lands of the Orinoco Company at present is balata, a substitute for rubber. There are great possibilities for work and wealth on the concession of the Orinoco Company, and there is every reason to think the mineral deposits varied and rich. The soil is extremely fertile and the climate as agreeable as it is anywhere in this part of the country. The Orinoco Company has a capital stock of \$30,000,000.

The first town of consequence at which we stopped was Barrancas, about halfway between the mouth of the Orinoco and Ciudad Bolivar. It is also near the mouth of the Macareo, a delta stream which enters the Gulf of Paria not a great distance from the Port of Spain, and which furnishes the only practicable inland route for river steamers from Port of Spain to the Orinoco. Barrancas is of some commercial interest, for the reason that it is an assembling and shipping point for cattle, most of which are sent to Cuba. This trade has come into being since the war.*

The *Wilmington* also stopped at St. Felix, a town of some 2,000 inhabitants, six or eight hours from Barrancas, in the direction of Ciudad Bolivar. This is the point of departure from the river for persons bound for the El Callao gold-mining district. It is stated that more than \$40,000,000 in gold have been shipped from St. Felix in recent years. There has been for several years little activity in this region; but there are indications that a revival of interest is at hand, and American capitalists are trying to get from the Venezuelan Government a concession giving them authority to build a railroad from St. Felix to the gold fields, some 150 miles distant. When this road is built, it will be one of the most profitable in South America, for all the traffic to and from the mines will have to pass over it, and the region will develop rapidly when it has communication by rail with the outside world.

At Guanta, the port for Barcelona, which is 12 miles inland, we found the President of the State awaiting us. He was entertained on the *Wilmington*, and one of the Colt automatic guns was fired for his diversion. This gun, firing some 500 shots a minute, produced a vivid impression here, as it did elsewhere. I made a point of having this gun fired any time there were any army officials on board, and the result is that an order has been sent to the United States for several of them. This is the first order for artillery that has been sent to the United States by the Venezuelan Government for a very long time; indeed, there is no record of any other.

At Guanta, I saw a train load of coal brought from the mines,

* See CONSULAR REPORTS No. 220 (January, 1899), p. 133, and No. 222 (March, 1899), p. 378.

13 miles distant. These are the mines lately leased from the Government by an Italian syndicate. This coal was recently tested by an Italian man-of-war and reported upon favorably. The harbor of Guanta is a vast one, and there are 30 feet of water at the pier. These points, taken in connection with the large supply of fairly good coal at hand, may make it important in a naval sense.

The visit of the *Wilmington* made a strong and agreeable impression wherever she went in Venezuela. The splendid condition and appearance of the men and the boat never failed to call forth praise from those who saw them. As a result of the trip, I think it will be found that American prestige has been substantially augmented and the idea of American power and resources, vitalized by the war, enormously deepened and widened. Practical results are coming, too, in the way of increased commerce with the United States; and if our merchants and manufacturers will take advantage of the favorable conditions that have been created for them, they ought to profit very largely.

Navigation has benefited by the trip of the *Wilmington* up the Orinoco, for the reason that a correct and comprehensive "running" chart of the river from the bar off Barima Point to Ciudad Bolivar was made under the direction of Commander Todd by Lieut. F. Carter, the navigating officer of the *Wilmington*.

The extensive works and plant of the New York and Bermudez (Asphalt) Company, situated on the San Juan River—one of the Orinoco delta streams—we could not visit, owing to lack of time and adequate charts. No charts of this stream have been made, and there is pressing need of them.

The New York and Bermudez Company is an important American corporation. I am informed by its managing director that it is sadly hampered in many ways and its ships and cargoes jeopardized by the lack of adequate charts and steering directions.

TRADE IN PARA.

The market in Para has shown a marked degree of activity this month. The profits in the rubber trade have attracted the attention of foreign capitalists. The newspapers published a few days ago a cable from London announcing the formation of a syndicate with a capital of £10,000,000 (\$48,665,000) for the exploitation of the rubber business. Difficulties will be encountered, however, should the syndicate, instead of making the purchase of the rubber itself in Para, attempt to buy the rubber farms. These estates are controlled by the "aviadores," men who supply the rubber gatherers with food and clothing, advancing money against the rubber to be

gathered. Unless an understanding is had with the aviadores, the rubber gatherers will sell neither the farms nor the rubber.

Another smaller syndicate, formed in England for the same purpose, some weeks back, succeeded in buying a few farms in the Marajo Island near Para; but the prices were excessively high—some say four times as much as anyone else would give, and more than double the amount of their value.

It is reported that Mr. Otto Fuerth, who some six or eight weeks ago purchased a valuable tract of rubber land in the island of Marajo for a large English syndicate, has just completed a second transaction, having purchased an estate in this section of country at the price of \$1,250,000.

Several representatives of other syndicates, who have made reconnoitering trips to the rubber regions of Para and Amazonas, stated, on their return, that the field is enormous; that the farther up they go, the more rubber they see; and that rubber gatherers are only working the smallest portion of the trees in their estates.

The total quantity of rubber received at this port during the month of February already aggregates upwards of 4,000 tons, and it now seems positively certain that before the end of the month the figures will exceed 5,000 tons, or nearly double the amount ever before received at this port during one month. This most extraordinary movement has given room for the wildest speculation. Prices have gone up and down. Every business house is heavily loaded with orders.

The Red Cross steamer *Camatense*, which bears this report, is carrying a record-breaking cargo of rubber. She arrived here from Manaus with a trifle over 400 tons on board, and she is to take 900 and odd of the 4,000 tons of rubber now in Para waiting for room in the steamers bound for New York. This total of over 1,300 tons is nearly double the amount usually shipped by a single steamer.

Both of the steamship lines plying between New York and Para have, since the first of the year, added two steamers to their fleets. This development of transportation facilities is much needed. Not only are the river lighters filled with rubber left behind in Para, but, I am informed, scarcely a steamer sails hither from New York without leaving on the dock a quantity of merchandise, which found no room aboard for Para and the Amazonas.

The delay in the exportation of staple articles from the United States to Para hurts the business relations between Brazilian merchants and American manufacturers. It is the great importance of these facts that impels me to touch once more on this subject, of which I spoke in a previous report.*

The Para State government has granted a contract for the estab-

* See CONSULAR REPORTS No. 220 (January, 1899), p. 59.

lishment of a model farm. For the consideration of \$50,000, the contractor is to bring to Para 1,500 Italian farm hands. The government is to pay their passages and give the ground for the establishment of the colony. Especial attention is to be paid to the raising of fine cattle, breeding horses, sheep, etc. The gathering of rubber, however, is so much easier work and so much more profitable that in almost every instance when an immigrant seeks the interior, he prefers to devote himself to that industry. Fifteen additional vessels have been added to the various fleets plying between Para and outer points since the first of the year, the majority of which run up the Amazon, passing through the newly explored rubber States.

K. K. KENNEDAY,

PARA, *February 22, 1899.*

Consul.

BIDS FOR COAL IN BRAZIL.

Consul Furniss writes from Bahia, March 8, 1899:

On April 20, at noon, the municipal government of the city of Bahia will open bids for 10,000 tons of coal of a class suitable for gas making. I inclose herewith a translation of the specifications, etc., and would suggest that they be given as wide a circulation as possible, that our producers may have a chance to compete.

For the past few years, the municipality has been buying on the open market as the coal was needed, and has been paying an average of 32s. (\$7.77) per ton on board in harbor.

[Translation of advertisement appearing in *Journal de Noticias de Bahia*, on March 7, 1899.]

By order of the mayor, his secretary publishes that bids will be received until April 20, 1899, for the furnishing of 10,000 tons of coal suitable for the manufacture of gas for public and other illumination of this city, under the following conditions:

(a) Eight thousand tons of common coal capable of producing approximately 31 cubic meters (1,095 cubic feet) to 100 kilograms (220.46 pounds) distilled, and of an illuminating power of not less than 7 candlepower.

(b) Two thousand tons of cannel coal producing more than 36 cubic meters (1,271 cubic feet), with an illuminating power of not less than 18 candlepower.

(c) The illuminating power will be measured at the middle of a spermaceti candle which burns 7.80 centigrams (1.224 grains) per hour and a fan-flamed gas tip No. 4½ sugg. consuming 100 liters of gas per hour.

(d) The bid must be accompanied by a sample of each coal, the sample to weigh 40 kilograms, and there shall also be submitted a report of the analysis of the coal offered.

(e) The temperature at which the distillation will be made will be between 900° and 1,000° Celsius, and the coal must give results at this temperature to agree with conditions a and b.

(f) The furnishing of coal shall commence in August and shall be made regularly each month. The price shall include the freight to Bahia, the discharging of the coal being done by the municipality.

(g) The payment of each cargo will be made ninety days after sight of draft, at the exchange of the day for ninety days' sight drafts; the freight to be paid after completion of discharge of cargo, at the exchange of the day of the termination of discharge.

(h) The contractor shall be fined 10 per cent of the value of the cargo if the coal does not correspond to samples. The value of the coal is to be calculated by its products and illuminative power, when distilled at 900° Celsius.

(i) The mayor has the right, when the contractor is fined in accordance with clause h, to revoke the contract, if another cargo is found equally bad, and the contractor shall have no right to claim losses and damages.

(j) The mayor will publish in the papers the bids submitted declaring the accepted bidder, and the contractor is to deposit 5,000 milreis* as a guaranty to fulfill contract.

All bids must be submitted in sealed envelopes and accompanied by a provisional deposit of 2,000 milreis† to guarantee the signing of the contract when awarded. Bids will be received until noon on April 20, when they will be opened in public session in the municipal chamber.

NOTES FROM NORTHERN BRAZIL.

Consul Kenneday writes from Para, March 7, 1899:

Thanks to the liberal production of raw materials, northern Brazil is in a prosperous condition. It is interesting to note the effect of fluctuations of exchange in Brazil. The northern States—Para and Amazonas—desire low exchange, while the southern part of the country wants high rates. Rubber represents, it might be said, the currency of the country in the Para and Amazonas regions, and the lower the exchange goes, the greater the prosperity. High exchange benefits the south, where coffee is the principal production. Should exchange rise, as it is confidently believed in some quarters that it will, because of the consolidation of the foreign debt of Brazil and the payment of 10 per cent of the customs duties in gold, Para and the Amazonas may receive a temporary check. However, the condition of this section is so sound that these States would soon become accustomed to the new conditions. This is undoubtedly the view taken by England, France, Germany, and Belgium, as capital from these countries is flowing here in a steady current. Last week, a Belgian syndicate purchased one of the electric plants of Para and several rubber fields.

United States capitalists have not been very active in the investment of capital in this country. There are, however, I am glad to say, an unusually large number of American drummers studying

* To-day equal to \$675.

† \$270.

this country, and they move with astonishing energy and confidence. A few days ago, five sailing vessels arrived in the harbor, filled to their utmost capacity with coal, lumber, and other products from the United States; and to-day comes a large steamer packed with machinery of American manufacture, presumably sent by Mr. Charles R. Flint to complete the trolley electric railway in Manaos—one of the most important enterprises in this part of Brazil. The manager expects to have the road in operation within the next sixty days. The line is said to be some 15 miles in length, and the cost will be close to \$1,000,000. The company is incorporated under the laws of the State of New York, and Mr. Flint is treasurer. Mr. Flint has done much to promote our interests throughout all South America.

The dispute, which is of long standing, between Brazil and Bolivia over the dividing line of the two countries now seems practically settled; the Brazilian Government, it is reported, having accepted the demands of Bolivia, which country has, within the last three weeks, established a custom-house at the disputed point. The strip of land contains many thousand valuable rubber fields, and the change will be keenly felt in the revenue department at Manaos.

MINERAL PRODUCTS OF CHILE.

The province of Antofagasta extends from $21^{\circ} 30'$ to 26° south latitude, and is composed of the three departments of Tocopilla, Antofagasta, and Taltal. Each of these has its port of the same name, from which almost all the products are shipped, the other ports being minor ones.

ANTOFAGASTA.

This department, which is the principal one, is wonderfully rich in gold, silver, copper, salt, and anhydrite; also, in lead. The production of Bolivia is nearly all exported through the port of Antofagasta, as the Antofagasta and Bolivia Railway is the only one that extends into the heart of that country, having a length of some 600 miles. Silver, copper, antimony, bismuth, tin, mercury, and sulphur are received from Bolivia.

Gold.—The gold mines of this department exist in three districts: San Cristobal, Santa Maria, and at the mouth of the River Loa. The gold is found in well-defined fissures, quartz lodes in quartz trachyte, and, with the exception of one mine—the Bolaco, in San Cristobal—very little work has been done, chiefly owing to the lack of water, which has to be taken in carts 36 miles, and sold at a price of £1 16s. (\$8.74) a ton. The production of gold from San Cristobal

No. 225—10.

has been for the last few years on an average of 200 kilograms (440.92 pounds) fine a year. The percentage has averaged 10 ounces to the ton. The production from Santa Maria and the Loa is small.

Silver.—There are several districts in this department, the most important being Caracoles, Sierra Gorda, El Inca, Paine, Laukir, Atahualpa, Aralar, Sierra de Plomo, Piquios, and Cerro de Pascua. These are distributed all over the department, and, with the exception of Sierra Gorda, heavy freights by carts must be paid to the different stations on the railway. The production of silver, which once (in 1873) reached 250,000 kilograms (551,150 pounds) fine from Caracoles alone, of an average of 1.65 per cent, has been reduced in subsequent years to 25,000 kilograms (55,115 pounds) in the whole department. The percentage now averages 0.3 per cent. The first three districts named are the only ones at work at present. The ores are chiefly chlorides in limestone.

Copper.—The production is gradually increasing, owing to the higher prices quoted for bar. The chief districts are Chuquicamata, Sierra Gorda, Lomas Bayas, El Desesperado, Naguayan, El Cobre, and Blanco Eucalada. The ores are chiefly green carbonates, oxychlorides (atacamite), and silicates, there being very little sulphuret. None of the mines have any depth. The products of most of them suffer from the high freight rates. The production can now be estimated at 12,000 tons a year, of 15 per cent copper, or 1,800 tons fine. This will most likely be doubled soon. Half is shipped direct and half used for making copper matte with a percentage of silver, by mixing with silver ores.

Iron.—A little is produced for fluxing purposes.

Carbonate of lime.—Enough is quarried to supply the two smelting establishments in Antofagasta.

Nitrate of soda.—There are extensive fields in this department, which have been worked since the year 1870. The first discovered, at Salar, 6 miles inside of Antofagasta, have been worked out. Others found farther in, and belonging to the same company—Cia. de Salitres de Antofagasta—employ 800 to 1,000 men and produce 30,000 to 35,000 tons a year. There are other fields in Aguas Blancas, 60 miles southeast of the port of Antofagasta, where work is to be resumed shortly. These are of vast importance, and as soon as a railway is constructed will increase the production considerably.

Borate of lime.—There are extensive fields of borate at about 160 miles from the coast, at Ascotan, Carcote, Ollagüe, Tilopozo, and Carvajal. The only ones that can be worked at present are those of Ascotan and Carcote, owing to poor railway facilities. The production is about 7,000 tons a year.

Sulphate of iron.—There are some large deposits near Sierra

Gorda, which have been worked on a small scale for treating copper ores.

Salt.—A whole hill of very pure salt, some 20 miles in length, exists at about 150 miles from the coast. The railway is too far removed to make it available for commerce.

Anhydrite.—Small deposits are found in different parts near Caracoles. Some has been quarried for ornaments. It is not adapted for building, as it is soluble in water.

Lead.—There are some good mines of this metal with a small percentage of silver in Sierra del Plomo, Cerro del Arbol, Sierra Gorda, and other districts; but they are not worked at present, owing to defective means of communication.

TOCOPILLA.

This department produces gold, very little silver, copper, nitrate of soda, and borate of lime.

Gold.—This does not amount to much and is all sold in Antofagasta.

Copper.—Near the port of Tocopilla, there are several mines which give sulphurets and which have been worked to a depth of 200 fathoms. In Cobija and other smaller ports south of Tocopilla, there are also very rich mines. The present production of the whole department is about 9,000 tons a year of 15 per cent ore. All is sold to the Lotta Company, in the south of Chile.

Nitrate of soda.—The fields in Toco, 50 miles inland, are extensive. They belong to different owners and produce 100,000 tons a year.

TALTAL.

This department produces gold, silver, nitrate of soda, and copper, all in large quantities.

Gold.—The famous mines of "Guanaco" produced, ten or fifteen years ago, enough to keep four large establishments going. Now, the production has decreased, owing to the small amount of work carried on. It is calculated that about half a ton of pure gold is still produced. The ores are all milled in the port of Taltal.

Silver.—There are some very rich districts, amongst which I may mention Cachinal (including the famous Arturo Prat mine), Sierra Esmeralda, Griton, Cifunchos, and Argolla. With the exception of the first named, there is very little work done; still, the production is not less than 25 tons of bar silver. With more active work, this ought to be increased.

Nitrate of soda.—These fields are also very extensive and have, like the others in the province, their railway. The yearly production is about 90,000 tons.

Copper.—There are also several copper mines, the production of which amounts to about 4,000 tons of 18 per cent ore a year. This is also sold to the Lota Company.

BOLIVIA.

Through Antofagasta the following quantities of Bolivian minerals are annually exported:

	Tons.
Tin, in bars.....	2, 500
Oxide of tin.....	5, 000
Sulphide of antimony.....	500
Sulphur.....	10 to 20
Silver ores.....	3, 000 to 4, 000
Bismuth.....	60 to 100
Silver bars.....	150 to 200
Mercury.....	10

TOTAL EXPORTS FROM CHILE.

In the year 1896, the following statistics were furnished by the custom-house:

Chilean minerals.

Articles.	Quantity.	Value in United States gold.
Borate of lime.....kilograms...	6,533,794	\$119,057
Copper matte.....do.....	916,172	33,433
Copper minerals.....do.....	751,175	13,709
Copper and silver minerals.....do.....	25,650	936
Gold minerals.....do.....	363,665	26,474
Silver minerals.....do.....	2,586,725	377,886
Gold bars.....grams...	261,597	76,386
Silver scraps.....do.....	631,000	4,606
Silver bars.....do.....	78,817,000	740,241
Argentiferous lead.....kilograms...	590,912	21,569
Nitrate of soda.....do.....	204,346,724	2,934,489

Bolivian mineral exports through Antofagasta.

Articles.	Quantity.	Value.
	<i>Kilograms.</i>	
Mercury.....	9,000	.....
Tin oxide.....	4,085,520	\$745,009
Bismuth.....	58,654	106,945
Tin bars.....	1,934,075	423,562
Antimony ores.....	472,377	34,483
Silver ores.....	2,931,720	543,057
Silver bars.....	135,051	2,971,505
Sulphur.....	12,003	5,475

C. C. GREENE,

ANTOFAGASTA, December 17,* 1898.

Consul.

* Received in Department of State April 6, 1899.

GOLD STANDARD IN ECUADOR.

Consul-General De Leon sends from Guayaquil the following report, dated November 26, 1898 (delayed in transmission to the Bureau of Foreign Commerce):

I transmit herewith translation of the new coinage law of Ecuador. Ecuador has heretofore been upon a so-called bimetallic, but practically monometallic silver, basis; no gold in circulation and her silver irredeemable. The gold coin of the country, the condor, long since ceased to circulate, and, in fact, took flight as soon as it appeared; any that are now to be found are held as curios, so rare have they become.

The circulation of the country was and is almost altogether paper money issued by the banks and redeemable in silver only (see annexed "bank statistics," showing coinage, paper issue, metallic reserve, etc.). No city except Guayaquil has any banking institutions, but agencies of Guayaquil banks are established in several other cities of the Republic.

The whole foreign commerce of the country virtually passes through Guayaquil, which is, as it were, also the clearing house of the other ports of the Republic, relatively small and insignificant.

The change by the world to a gold basis has finally driven Ecuador to adopt the same course, and Congress has just enacted a law of coinage which within two years will place the monetary system on a gold basis. Ecuador is the fourth country of Latin America to adopt this measure, Venezuela, Costa Rica, and Peru having already taken the step.* Brazil, Uruguay, and Chile, while nominally on a gold basis, are really subject to the disadvantages of paper money, because their internal financial condition precludes an easy conversion of the currency.

The law recently enacted was drafted by bankers and merchants of acknowledged ability as financiers, and is expected to be thoroughly adequate to the needs of the country. Commerce has been inconvenienced not only by the depreciation of silver, but also from the arbitrary fluctuations of exchange, sometimes as much as 40 to 60 per cent within a few months, and, owing to excessive imports, it was frequently impossible to buy from the banks a single draft on New York or London (even for \$50); consequently, the foreign-trade relations of the country suffered great embarrassment, and finally the mercantile interests came to the conclusion that the only

* Salvador also adopted the gold standard in 1897. See CONSULAR REPORTS No. 206 (November, 1897), p. 454.

remedy for the unsatisfactory state of affairs which has prevailed for the last five years would be the adoption of the gold standard at the rate of 30.6 to 1.

The stable condition of Ecuadorian currency, the financial resources of the banks of issue—relatively as solid as any in the world—and the crying need for a fixed monetary standard seem to give assurance that the present measure is wise.

Exchange on New York has been arbitrarily fixed by banks and merchants during the last ten months at 105 to 108, but this rate has not been strictly adhered to; 110 and more has been paid. Another anomaly has been that American gold coin has been worth 10 to 15 cents more than exchange.

The effect of the present law will be to put Ecuador on a gold basis, and, while paper will continue to be the money of circulation, it will be redeemable in gold and not in silver, as at present; the condor, which may be regarded as the unit of value, will be practically of the same metallic value as the pound sterling, and the silver sucre will possess an actual value of about 48.6 cents in American gold, ten of them being equal to 1 condor.

Conditions hitherto existing have been most favorable to the wealthy cocoa, coffee, and sugar planters, who sold their products for gold and paid in silver for all they bought in Ecuador, notably for labor, which has been the chief sufferer; wages, low at best, have been lower still since payable in a depreciated money.

[Translation.]

COINAGE LAW.

The Congress of the Republic of Ecuador decrees the following law upon national money:

ARTICLE 1. The coins of the nation shall be:

(a) The gold piece of 10 sucres, weighing 8.136 grams, or in fine gold 7.3224 grams.

(b) The sucre, or hard dollar, of silver, weighing 25 grams, which shall be considered divisible into 100 cents.

(c) The fifth (commonly called "peseta") of silver, weighing 5 grams, equivalent to 20 cents of a sucre.

(d) The tenth (commonly called "real") of silver, weighing 2.5 grams, equivalent to 10 cents of a sucre.

(e) The twentieth (commonly called "medio") of silver, weighing 1.25 grams, equivalent to 5 cents of a sucre.

(f) The nickel and copper coins mentioned in article 12 of this law.

ART. 2. The gold and silver coins shall be 900 fine, with a toleration of one and two thousandths, respectively, in fineness and weight.

ART. 3. The gold coin of 10 sucres, which shall be called Ecuadorian condor, shall be 22 millimeters (0.866 inch) in diameter and shall carry the following stamp: On the face, the bust of Gen. Antonio José Sucre, encircled above by the inscription

"Republica del Ecuador," and at the bottom the year of coinage; on the reverse side, the coat of arms of the Republic, toward the rim on the left the weight of the coin in numbers, in the upper part the value expressed in letters, and at the bottom the initials of the name and surname of the assayer, as well as the place of coinage.

The "grafila" (border on the edge of the coin) shall be formed of a series of small semiellipses in contact with its inner diameter. The milled edge shall be composed of alternate prominences and depressions, symmetrically cylindrical in form and cut perpendicularly.

ART. 4. The silver and copper coins shall have the same stamp, grafila, milled edge, and diameter of the coins of equal value previously minted.

ART. 5. The introduction of foreign silver coin, likewise the coinage and importation of national coin except when authorized by this law, is prohibited.

ART. 6. The period of two years, commencing from the date of the promulgation of the present law, is fixed for the definite conversion of the monetary system. During said term of two years, there shall be recoined at the mint in Lima, for the account of the nation, not more than 100,000 sucres in 10-cent pieces of silver and 50,000 sucres in 5-cent pieces of the same metal.

Furthermore, the following shall be exported to London to be sold for the account of the State: Not more than 3,000,000 sucres in silver; all the Chilean and Peruvian coin of weight and fineness equal to the national which circulates in the Provinces of Cañar, Azuay, Loja, and Oro. The Government will redeem this money through the banks, which will exchange it for national money at par as soon as the Executive, acting in accord with the commission of money, shall issue the corresponding order. The value of the export shall be invested in the coinage and purchase of Ecuadorian condors in England. As regards the Peruvian and Chilean coin, it shall be exported according to the directions of the commission of money, given in conformity with the consent of the banks, and a corresponding contract shall be made between the Government and at least one of the banks relative thereto.

The Government shall pay the cost of the coinages and recoinages incurred by the contracting bank in England and Peru, the loss in metal, the freight, the insurance, and incidental expenses attending the importation of national gold which the banks may import. For such operations, the banks shall not collect any sum for commission.

ART. 7. During the period fixed for the conversion, the banks, their agencies or branches, shall be obliged to receive, on account of payments or in exchange for their own notes, the sucres, medio (half) sucres, and quintos (20-cent pieces) which may be presented.

ART. 8. The pound sterling (\$4.8665) shall have a value of 10 sucres.

ART. 9. For the expenses occasioned by the conversion of money, there shall be appropriated one-half of the total value of the revenue derived from the 20 per cent additional duties on imports. The collector of the custom-house shall deposit every two weeks the product of this appropriation, until the amount for which the Government is indebted on this account is canceled, together with 6 per cent interest for any advances made by the banks to cover such expenses.

ART. 10. After the expiration of the two years, it will not be obligatory to receive in payment more than 5 cents in copper or nickel, 1 sucre in subsidiary silver money, or more than 10 sucres in coin silver weighing 25 grams.

ART. 11. The Executive shall name, in accord with the Council of State, a commission of money, which, composed of three honorable merchants and one secretary, shall reside in Guayaquil, and fulfill without remuneration the following duties:

(1) Study the monetary circulation of the country and make statistical reports thereon.

(2) Report upon the equivalent intrinsic values of foreign gold coins as related to the national.

(3) Also inform the Government as to the monetary condition of the country and any other matters appertaining to the subject, and suggest reforms and other convenient administrative measures.

ART. 12. The copper and nickel coins shall have the value as stamped. New importation of these coins is prohibited.

ART. 13. All laws that treat of the same subject are annulled, even though they may not conflict with the present law.

BANK STATISTICS.

Report of Ecuadorian monetary commission, December 31, 1897, quoted in part from the Revista Comercial, a sheet edited by the secretary of the Guayaquil Board of Trade.

Description.	Banco del Ecuador.	Banco Comercial y Agrícola.	Total.
	<i>Sucres.*</i>	<i>Sucres.*</i>	<i>Sucres.*</i>
Total coinage.....			4,790,730
Metallic balance in banks.....	1,513,700	1,038,080	2,551,730
Metallic reserve exacted by law.....	546,000	789,350	1,335,350
Paper issue of banks.....	1,820,000	2,634,000	4,454,000
Capital paid up.....	2,000,000	2,500,000	4,500,000

* Ecuadorian silver.

RAILWAY CONTRACT IN SALVADOR.

Consul Jenkins writes from San Salvador, March 3, 1899:

I inclose translation of a contract entered into by the Government of Salvador and the Central American Public Works Company, Limited, of London. Concessions and contracts were given this company in 1892 and again in 1894 to construct and operate the Acajutla and Santa Ana Railroad and the Acajutla and San Salvador Railroad.

The present terms are considered most favorable to the Government of Salvador; the foreign debt will be paid, enabling the present administration to develop the resources of the country.

[Translation.]

ADDITIONAL CONTRACT BETWEEN THE SUPREME GOVERNMENT OF SALVADOR AND THE REPRESENTATIVE OF THE CENTRAL AMERICAN PUBLIC WORKS COMPANY, LIMITED.

Mariano Guzman, Secretary of State in the Department of Fomento, fully authorized by the Government of Salvador, and Mark Jameston Kelly, general director of the Central American Public Works Company, Limited, of London, and representing the same, have made the following contract:

(1) The company is to cancel the amount of £725,000 (\$3,528,000) of bonds, which

to-day represents the balance of the foreign debt of the Government of Salvador arising from the loans of 1889 and 1892, within six months from the date of the approval of this contract by the legislative power; but the Government consents that if the company can not make the total delivery of the bonds in the stipulated time, it may leave unsettled up to £60,000, with the understanding that the company, for its own account, shall pay the interest and redeem the bonds, under the same conditions as the Government is obliged to do—that is to say, 6 per cent interest per year and 2 per cent per annum for redemption.

(2) From January 1, 1899, and during the period of eighteen years from said date, the Government is to pay to the company a fixed subvention of £24,000 (\$116,000) annually, which will be paid in this city semiannually, falling due on the 30th day of June and the 31st day of December of each year. This subvention of £24,000 substitutes and annuls the guaranty of £48,000 per annum, stipulated in the original contract as well as in the additional contract of December 17, 1894.

(3) As soon as the company shall have delivered the bonds of the foreign debt, according to the terms of the first clause of this contract, the Government shall transfer to the company, free of excise duties, the railroad property, with all of its annexes and territory, said transfer being subject to the mortgage established as guaranty for the loans of 1889 and 1892, respectively.

(4) The Government, in order to guarantee the subvention of £24,000 annually, now stipulated, appropriates 15 per cent of the import duties in all of the maritime custom-houses of the Republic, to be collected either according to the existing laws or in virtue of other laws which may be later issued; and the Government binds itself, if the product of the 15 per cent is not sufficient to cover the subvention, to pay the difference from its general income. For the carrying out of the present clause, the Government will issue special bonds, which will be delivered to the bank in this city designated by the company, which bonds will serve solely for the payment of the 15 per cent of the import duties in all of the custom-houses of the Republic, anyone paying said tax in money or in any other manner to be fined by a penalty of 15 per cent. The bank designated for the sale of the custom-house bonds will pay to the company the semiannual amounts stipulated in article 2, and fix, jointly with the Minister of Hacienda, the current rate of exchange in this city in pounds sterling, at three days' sight, on the date of each payment to the company; and if on said date the bank shall have received a sum in excess of the amount of the subvention—that is, £12,000 semiannually—said excess will be immediately delivered to the general treasury in current coin; under contrary conditions, the Government binds itself to cover the balance which may be lacking, within ten days, from the funds of its general income.

(5) If the company shall not deliver the bonds of the exterior debt in the specified time, according to the terms of the first clause of the present contract, the Government will be privileged to take immediate possession, without legal procedure, of that part of the railroad corresponding to each one of the loans; it being agreed that the line between Acajutla, Ateos, and La Ceiba corresponds to the loan of 1889 and that from Ateos to Santa Ana to the loan of 1892, the other lines being the property of the company, and to immediately effect the proper liquidation without detriment to either party, and arrange the reciprocal indemnities; and in case of disagreement, these will be fixed by judges, one being named by each party. If the interest on and redemption of the £60,000 of pending bonds, or any part thereof, is not paid punctually, the Government will have the right to deduct from the subvention the necessary sum for this purpose, and to place the payment to the account of the company, in addition to the other expenses which may be occasioned, whenever it was through the fault of the company that the payment was not made. In the event of liquidation, set forth in this article, the sum of £12,000 which the

Government may have paid as subvention will be taken into account as a charge against the company.

(6) The company will hasten as much as possible the construction of the projected road between Nejapa and San Salvador, to the end that the railroad will be concluded to the capital during the next summer or by the 30th of June, 1900. This period can only be extended for causes of force majeure, in which is included the loss of any shipment of rails or other indispensable materials satisfactorily proved, as well as disturbance of public order or recruiting, which may deprive the company of laborers during the summer season. For failure to comply with the foregoing article, the company will pay to the Government a fine of £1,000 per month; and for failure to pay three fines in succession, the Government will be privileged to take possession, without any legal action, of the railroads which belong to the company, as provided in the preceding clause.

(7) The company will maintain at all times, for the public service, a train making at least one daily round trip between Acajutla and the terminal stations of Santa Ana and San Salvador, excepting under circumstances over which it has no control. A service of at least two round trips per week between Ateos and La Ceiba del Guarumal will be maintained; and appropriate connections will be established, so that one may be able to travel daily between said terminal stations.

(8) It is agreed that the company shall give preference to native labor.

(9) The company shall be responsible for all freight delivered to it for shipment, and, in case of loss or damage, shall pay within thirty days the proved value, without including profits, excepting in cases where it proves that it was not at fault. Upon returning any freight which may have been stolen to its destined station, the company will not make additional freight charges, and will be obliged to use all diligence in locating it.

(10) During the term of this contract, the company will establish its tariffs with the utmost clearness, so that in no case can one article be charged for in different ways; in case of doubt, the lesser charge will be observed.

(11) The principal contract of April 2, 1894, and the additional one of the same year will be complied with in all details that are not opposed to or modified by the present contract.

In testimony of which, we sign the present in duplicate, in San Salvador, 8th day of February, 1899.

M. GUZMAN.

M. J. KELLY.

The foregoing contract being made between the Minister of Fomento, Mr. Mariano Guzman, representing the Government of Salvador, on one part, and M. J. Kelly, representing the Central American Public Works Company, Limited, on the other, composed of eleven articles, which change in part the contract celebrated April 2, 1894, and the additional one of December 17 of the same year, and being in conformity with the instructions given to Mr. Guzman, the Provisional Executive Power, in cabinet meeting, it is decreed to approve it in all of its parts, and to submit it for approbation to the National Assembly, in accordance with part 14 of article 91 of the constitution of the Republic.

AGRICULTURAL CONDITIONS IN PARAGUAY.

Minister Finch transmits from Montevideo, January 19, 1899, a letter from an emigrant from the United States who has recently settled in one of the colonies of Paraguay. The information in the letter is summarized as follows:

The climate of Paraguay is delightful, the heat during the warmest season not being oppressive. An evidence of the purity of the air is the fact that fresh meat can be kept for several days during summer without becoming putrid. The soil in the southeastern part is fertile and capable of producing in abundance corn, sugar cane, alfalfa, and root crops of all kinds. Near the Paraguay River, the land is not so good. Each colonist receives about 62 acres of land, implements, and an allowance in money on which to live for seven months, all to be paid for in ten years without interest. The implements consist of hoes, shovels, axes, saws, etc., for hand labor. Seeds for the first year are also furnished and charged in the same way. A yoke of oxen is loaned free when needed.

No cultivation of the land by machinery appears to have been attempted. Very little of the ground is free from stumps, and the horses of the country are not strong enough to pull a plow. It is impracticable to use oxen for this purpose, as the cattle are only half domesticated. The woods are heavy and hard and the grain twisted; they do not adapt themselves readily to building purposes. The typical Paraguayan farmhouse is built in the following manner: Posts are set firmly in the ground, upon which beams of round or square timber are laid; the roof is made of native straw, and the walls are a combination of upright sticks interlaced with a sort of lattice work and plastered over with mud. Sometimes shingles (made with a hatchet) are used for the roof, instead of the straw. A fair-sized house can be built complete for about \$140 in United States currency.

Coffee costs about 40 cents a pound; sugar, 8 cents; tea, \$1.10; and flour, \$8 per barrel. Butter can not be had. Lard and pork cost about 13 cents per pound. Beef is cheap— $2\frac{3}{4}$ cents per pound—and is fairly good.

Under date of January 19, 1899, Minister Finch sends the following statement as to the business outlook in Paraguay, prepared by Vice-Consul Harrison, of Asuncion:

It is generally believed that the liberal attitude assumed by the new Government and the fall of the premium on gold will make trade better. The drawback has been the continuous droughts and

the ravages of the locusts for the last seven years. The water in the small rivers was so low that craft could not be used to bring down the yerba mate; and this, the staple article of export, could not be shipped to any extent, even to the Argentine Republic, which is the chief buyer. This season, there have been steady rains, the locusts have done no serious harm, and the tobacco crops will be good. With the new system of preparing tobacco adopted by the Bank of Agriculture and private concerns, it is believed that this article will be more acceptable in European markets than heretofore. It will be prepared in the same manner as in Cuba. Should the Government obtain the loan of 15,000,000 francs (\$2,895,000) which is being negotiated in France, conditions will undoubtedly improve.

TRADE CONDITIONS IN JAMAICA.

In reply to inquiries by the editor of a New York trade journal (to whom the original letter has been forwarded), Consul Dent, of Kingston, under date of March 6, 1899, writes:

Practically all of the purchases here are on credit. Some few merchants discount their American bills for cash at 2 per cent. The usual English discount for cash is $2\frac{1}{2}$ per cent, and at least one house here has received that discount in the United States. The usual credit is three months, but merchants desire that the credit be three months here or four months in the United States, in order to allow shipment of goods and return of payments.

Invoices are usually settled by acceptances of drafts drawn through the Colonial Bank or the Bank of Nova Scotia. The rate of interest is 6 per cent. There is no way by which information can well be obtained as to solvency of merchants, except through the banks. The information, I think, would hardly be given by letter, but might be obtained through the New York correspondent. The Colonial Bank has an agency in New York, and the Nova Scotia Bank's correspondent is the Bank of New York.

The collection of accounts can be readily made here in the petty courts where the sum is under £50. Above that sum, the litigation would be extremely expensive. It is not at all desirable to engage in litigation here. Collections can be made through the banks, as the failure to pay an account so presented involves loss of credit. Bank commissions for collection are from one-half of 1 to 1 per cent. Debtors are allowed no exemptions whatever.

Exchange charges are high, both in selling and buying drafts.

UNITED STATES COMPANIES IN MEXICO.

The following extracts are from a letter to a Western correspondent by Consul Kindrick, of Ciudad Juarez, dated February 27, 1899:

You desire to know, in the first place, if a company organized in the United States can do business in Mexico by filing a certified copy of the articles of incorporation in the district in which it desires to be established.

The laws of Mexico seem very plain on this point. Provision is made for the establishment of companies such as you have in mind. It is necessary that the companies shall register their constitutions and by-laws, contracts, and other documents referring to their business; also, their last inventory and, if they have it, a certificate showing they are constituted in accordance with the laws of the United States or the respective States where they have been organized. This certificate must be signed by the ambassador of Mexico to the United States, or by the Mexican consul.

You desire to know if the Mexican Government taxes a mining corporation upon its capital stock, and at what rate.

There is no provision in the mining laws for taxing capital stock. The Federal Executive promulgated the mining-tax laws June 6, 1892, and therein provision is made for a yearly or annual payment of \$10 (Mexican) for each 1,000 square meters of land.

The legislative bodies of the different States can impose a tax upon the output of the various mines located and worked within their borders. Each State has a different law. In this State (Chihuahua), the tax is 2 per cent on the gross amount or value of the mineral extracted.

TRADE CONDITIONS IN WESTERN MEXICO.

In a letter to the editor of a New York trade journal (to whom the original has been sent), Consul Kaiser, of Mazatlan, under date of March 6, 1899, says:

Nowhere is there a more profitable field for practical missionary work, which would benefit both the buyer and the seller, than this part of Mexico, which seems almost wholly forgotten by our usually active merchants.

Mazatlan is a city of 16,000 inhabitants, steadily progressing, and with prospects of being one of the first commercial centers in Mexico. All business houses here are busy, and their trade is steadily increasing. Last year's sales of merchandise, according to the sworn statement at the collector's office, amounted to over \$40,000,000, and

doubtless, this year will show an increase of nearly \$10,000,000. There has not been a failure or a fire here for almost fifteen years, and losses on account of bad debts amount to very little. There are three banks, and three of the largest merchants have each a banking department connected with their stores.

Mexico is rapidly developing mines and extending railroads. Concessions have been granted to local capitalists to build two lines to Mazatlan, which will aid in the progress of the city.

Nearly everything used here has to be imported, and, as Mazatlan is the distributing center for a large portion of western Mexico, it will be seen that the market is a good one. The superiority of United States hardware, machinery, and electrical supplies is acknowledged by all; but German importers have steadily cut down our trade in these lines. Our trade methods have been at fault in the past. German, French, and English houses study the needs of the people. Our merchants could well afford to give longer credits to a trade as profitable as this. Wholesale firms here have abundant capital and pay cash; but the retail merchant buys on long credit, and the usual terms are six months. R. G. Dunn & Co., of Mexico City, give reliable information as to the financial standing of merchants. The laws of Mexico in regard to the collection of debts are even more satisfactory than in the United States. A claim sent to a good lawyer will generally bring the desired result. No exemptions are allowed debtors. Banking facilities for collections are excellent. Charges for current commercial paper are from 1 to 5 per cent, according to amount and difficulty in collecting.

STREET RAILWAYS IN MEXICO CITY.

Under date of March 30, 1899, Consul-General Barlow writes from Mexico City:

The company owning the street railways in this city is about to substitute electric power for the animal traction heretofore employed. There are about 300 miles of track in the district, which includes the city. One short line of $1\frac{1}{2}$ miles is called the "Baños" (or Baths) line. The rest belongs to the Compañía de Ferrocarriles del Distrito Federal.

Until recently, mules have constituted the traction power. They are small, hardy, well-fed animals, and travel rapidly. On the outskirts of the city, their usual gait is a gallop. For communication with suburban towns, the company has some large eight-wheel cars. Arriving at the outskirts of Mexico City, these are coupled into trains of five or more cars, and are thence drawn at good speed

by American dummy engines. Most of the cars of the company are constructed in the United States, though at the city workshops of the company they make all repairs and have built some cars. The steam suburban lines will probably be retained and used chiefly for freight. The management is American. Mr. H. P. Bradford is president. The conductors and drivers are Mexicans.

The franchises granted are about the same as in other cities. The capitalization is \$10,000,000. The street-car fares vary according to distance. In the city proper, they are 5 and 6 cents. Some of the suburban fares are as high as 30 cents.

The electric power will be obtained from coal. There will be no connection with the electric-light plants now in operation.

MALT LIQUORS IN ANTIGUA.*

Malt liquors are not largely in demand in this section of the West Indies. Owing to the tropical climate, they are regarded as productive of stomach disorders. The standard—in fact, almost universal—beverage is Scotch whisky and soda. This is substituted for tea or coffee at the midday lunch and evening dinner of many families. For the last fiscal year, the imports of malt liquors were: In bottles—United States, 210 dozen pints; United Kingdom, 552 dozen pints; Barbados (American beer), 80 dozen pints; in wood—United States, 220 gallons; United Kingdom, 352 gallons.

Malt liquors are imported by four wholesale houses, viz, J. J. Camacho & Co., E. O. Camacho & Co., William Forrest & Co., Bennett, Bryson & Co. These sell to the retail grocery stores or to private families. The retail stores cater, in turn (selling by the dozen only), to private consumers. No beer or ale is sold by the single bottle, save in a few "general license" stores, frequented solely by the black element. Antigua has no saloons or cafés where the Anglo-Saxon residents can obtain refreshments, the clubs, of which there are three, taking the place of public resorts.

The lager beers imported bear the label of one brewing house in Milwaukee, one in Rochester, N. Y., and one in Wrexham, Devonshire, England. The number of dozen pints to the cask varies from 6 to 10. The duty is 24 cents per dozen pints. There are no imposts on the bottles or casks and no lighterage or wharfage charges. The cost to the manufacturers, laid down but exclusive of duty, is 75 to 87½ cents per dozen pints for American beers and 60 cents for the English product. The former retails to consumers at \$1.44 per dozen, the latter at 96 cents to the stores and \$1.08 to families.

* This report was submitted in response to inquiries by a Virginia firm, to which Advance Sheets have been sent.

English ales, imported in pint bottles, sell to the trade at \$1.20 per dozen and to families at \$1.32 per dozen. Ale in wood is imported in 50-gallon casks, bottled here, and sold at \$1.44 per dozen pints. The duty is 16 cents per gallon.

Dealings with the exporter are usually on a cash basis; but this, in view of the more or less infrequent mails, means thirty to forty-five days. The only direct route from New York is that of the Quebec Steamship Company, with sailings from New York.

HENRY M. HUNT,

ANTIGUA, *February 24, 1899.*

Consul.

TRADE AND TRADE OPENINGS IN SOUTH AFRICA.

NEW ENTERPRISES.

The Uitenhage (Cape Colony) Town Council is preparing for the introduction of an electric-light plant. Queenstown (Cape Colony) has borrowed \$25,000 for water-supply works. A soap and candle factory is being organized in Horwick, Natal. The manufacture of fancy tiles is being started in Cape Town. Extensions of electric railways in Cape Town and Port Elizabeth are contemplated; the present plants are of American build. Cold-storage plants have been promoted in Cape Colony, Natal, and at Pretoria and Johannesburg.

Attention of manufacturers of binder twine is called to a fiber grown in Natal, which appears to be superior to sisal and equal to manila; 500 acres have already been planted. Immense coal fields have been found in Zululand, the seams being up to 45 feet in thickness and of good quality for locomotive and other purposes.

A large match factory is being organized in Cape Town to use American machinery. A match factory has been started in Natal. The Government of the South African Republic has granted concessions to two firms to erect match factories, on condition that a protective duty be imposed on matches imported into the State; also, for a soap factory, on condition that a duty of 8s. 4d. (\$1.62) per 100 pounds shall be levied on imported soaps. The Government, in the last case, is to receive 5 per cent of the net profits.

Concessions in the South African Republic have also been granted for other industries, such as tea, cocoa, and coffee plantations, a starch factory, and a chocolate factory.

Johannesburg now charges all bicycles a yearly tax of 10s. (\$2.43); and a fine of £5 (\$24.33) is imposed for the lack of license, bell, and lamp, and for riding on the wrong side of the street.

COMMERCIAL TRAVELERS IN NATAL.

Legislation by Natal, as regards foreign commercial travelers, prescribes a tax of £10 (\$48.66). If a traveler is found without a license, he may be prosecuted, and is liable to a fine for each offense equal to four times the amount of the license; and, in default of payment, to imprisonment, with or without hard labor, for a period not exceeding three months; or a civil action can be issued for the recovery of the amount of the license, in addition to the fine.

Samples are subject to duty; on deposit of a guaranty, the duty will be repaid to the interested party on leaving the colony. Certain railway privileges are granted, viz, double the weight of luggage allowed to ordinary passengers, and for any excess, half the tariff rates in force. Samples must accompany their owner; they may be booked on starting to the last station to be visited by the traveler.

Cape Colony and the Orange Free State charge a license of £25 (\$121.66), against the £10 (\$48.66) of Natal, and Cape Colony allows a commercial traveler to travel first class on a second-class ticket; but it is hoped, under the new customs union, that all differences will be adjusted.

UNITED STATES COMPETITION.

Large shipments of galvanized barbed wire have been made to Natal by American manufacturers. Prices are said to be 20 per cent lower than English quotations.

A consignment of 3,000 tons of Pocahontas coal has reached Cape Town.

An order for 40,000 tons for Cape Colony has been placed for American rails at, it is stated, 20 per cent under English quotations. A large order for tubing has gone to America, which was, it is alleged, refused by a firm in Scotland, the American company complying with the customer's demand for longer lengths. The two last-named orders amounted together, it is stated, to \$2,500,000.

Statisticians calculate that the value (approximate) of American imports into South Africa for the year 1898 will show an increase of £932,609 (\$4,537,541.69) over 1897, or at the rate of 40 per cent; this notwithstanding the fact that the total imports into South Africa for 1898 are less than in 1897.

A conference of British manufacturers is proposed to lessen foreign competition in South Africa. The British and South African Export Gazette says:

The solicitude with which the South African market is being studied by our various trade rivals has been alluded to in this journal on almost innumerable occasions. A striking object lesson in this direction is furnished by a circular recently sent out by the Philadelphia Commercial Museum, copies of which are, we believe, being scattered broadcast throughout South Africa, and their tenor

shows the earnestness and thoroughness with which manufacturers on the other side of the Atlantic are now taking in hand the task of opening up a market for their wares in our colonies.

Among other firms, the circular was forwarded to Messrs. Baker, Bradshawe & Co., hardware merchants, Cape Town, who, in communicating its contents in a letter to a London contemporary, pertinently inquire whether something can not be done in the Old Country to strengthen the position of the British manufacturer? This firm goes on to inquire whether English manufacturers are asleep, and why they can not combine to safeguard their own interests, and points out that already the majority of locks and bolts used in the colony are of American make, and the stores are daily extending their stocks of American manufactures.

Even if only half of what is stated above be true, the situation is sufficiently critical to justify Messrs. Baker, Bradshawe & Co.'s stirring call to arms. The suggestion of a conference of manufacturers, which must be a preliminary to any common action, is a highly valuable one, which we think it would be well to act upon. English manufacturers should not fall behind the example of national combination which is now being exhibited by Americans.

AMERICAN BLOODED STOCK.

Fifty milch cows, of the best breeds, have arrived from Missouri, and fifty more are on the way. Several fine stallions and brood mares have also arrived from the Pacific States.

TRADE.

The value of imports into the colony of Natal for 1898 was £5,323,216 (\$25,905,430.66), a decrease of £660,373 (\$3,213,705.20) as compared with 1897. The value of exports was £2,202,021 (\$10,716,135.20), an increase of £580,089 (\$2,823,003.12) over 1897.

The value of diamonds mined in Cape Colony in 1898 was £3,647,874 (\$17,751,940.84), and the net profit thereon was £1,777,795 (\$8,651,639.37).

J. G. STOWE,
Consul-General.

CAPE TOWN, *January 26, 1899.*

AMERICAN IRON IN SOUTH AFRICA: TRADE NOTES.

The following, dated Cape Town, March 13, 1899, has been received from Consul-General Stowe:

The Pittsburg Iron Company has received an order for the supply of iron piping for Johannesburg, South African Republic, which, it is estimated, will amount to \$1,000,000; but, as it was secured through a London house, the iron will not appear in the imports to South Africa from the United States. This is only one of the items for which South Africa does not get credit as an importer from America.

The South African Republic has appointed consuls-general to Washington, London, Berlin, and other capitals. Vice-consuls will

be placed in Rotterdam, Flushing, Antwerp, Bordeaux, Marseilles, and Genoa.

The Argentine Republic and Austria-Hungary have placed diplomatic consuls-general at Cape Town.

The recent drought in South Africa is over, soaking rains having fallen and rivers being now overflowing.

For the month of February, 1899, the imports into Cape Colony were \$645,589.89, as against \$605,523.99 in the same period for 1898.

The exports for February, 1899, were:

Merchandise.....	\$170,892.01
Diamonds.....	169,159.54
Gold (raw).....	732,290.80
Total.....	1,072,342.35

In 1898, the total was \$929,897.19.

Goods were entered at the ports of Cape Colony, during February, for removal to the South African Republic and other states outside the customs union, to the value of \$157,634.67, as against \$124,533.74 for February, 1898.

There were recently landed at this port from the United States 58 cows, 23 fine horses, 53 mules, and 50 Merino rams. Forty-four mules are on the way for Cecil Rhodes's vineyard, and 54 for general sale.

IMPORTS OF NATAL.

Consul-General Stowe, of Cape Town, under date of February 25, 1899, sends the following table of imports into the colony of Natal in 1898:

Articles.	1898.		1897.	
	Quantity.	Value.	Quantity.	Value.
Agricultural implements.....		\$75,897.93		\$105,870.70
Ale:				
In bottles.....gallons...	182,646		249,044	
In wood.....do.....	84,826		146,562	
Animals, live:				
Bulls and oxen.....number...	2,136		88	
Cows and calves.....do.....	102		20	
Donkeys.....do.....	4		9,473	
Horses.....do.....	1,781		604	
Mules.....do.....	421		3,030	
Pigs.....do.....	18			
Sheep and lambs.....do.....	5,504		3,403	
Other animals.....		8,472.58		3,046.43
Apothecary ware, drugs, and chemicals.....		570,991.31		591,343.82
Apparel and slops.....		1,798,227.25		2,016,040.09

Articles.	1898.		1897.	
	Quantity.	Value.	Quantity.	Value.
Arms and ammunition:				
Guns and barrels.....number...	1,134		2,220	
Pistols and revolvers.....do.....	400		555	
Caps (percussion) and detonators.....do.....	463,201		15,000	
Cartridges, rifle and pistol.....do.....	360,740		451,410	
Gunpowder.....pounds.....	45,833		39,410	
Dynamite and blasting compounds.....do.....	70,000		62,000	
Lead, shot, and bullets.....cwts.....	410		220	
Bags of all kinds, empty.....		\$45,355.78		\$187,569.51
Beads.....pounds.....	265,087		347,767	
Bicycles.....		283,682.62		353,439.30
Brass and copper:				
Wares.....		29,310.93		16,935.62
Bar and rod.....		1,328.55		953.83
Sheet copper and sheathing for ships.....		6,963.96		5,202.29
Brush ware.....		45,827.83		42,173.42
Butter, including margarin.....pounds...	1,870,497		1,105,239	
Cabinet and upholstery.....		512,865.84		742,345.64
Candles.....pounds.....	2,127,520		2,650,490	
Carriages, carts, and other vehicles.....		110,119.17		161,504.54
Cement.....casks.....	69,132		100,468	
Cheese.....pounds.....	802,491		746,500	
Chicory.....do.....	628,040		518,918	
Clocks and watches.....		47,316.98		43,268.05
Coke and patent fuel.....tons.....	822		567	
Cocoa and chocolate.....pounds.....	97,789		96,569	
Coffee.....do.....	3,432,708		3,264,328	
Confectionery.....do.....	1,062,878		808,135	
Cordage and rope.....cwts.....	8,643		7,423	
Corks and bungs.....gross.....	15,000		16,400	
Corn, grain, meal, and flour:				
Barley.....cwts.....	1,222		954	
Beans and pease.....do.....	2,173		1,200	
Maize.....do.....	289,397		553,752	
Malt.....do.....	29,463		20,972	
Oats.....do.....	23,027		21,867	
Wheat.....do.....	87,656		81,084	
Other grain, dhol, etc.....do.....	28,923		21,869	
Flour and meal—				
Wheaten.....pounds.....	53,288,328		35,741,208	
Bran.....do.....	7,281,855		5,427,009	
Mealie meal.....cwts.....	6,666			
Cotton manufactures:				
Piece goods.....yards.....	5,193,292		2,223,474	
Blankets and sheets.....pairs.....	357,026		464,817	
Earthen, china, and stone ware.....		156,268.18		244,872.55
Bricks and tiles.....		13,245.28		2,496.52
Forage and hay.....		67,498.49		24,999.21
Fruit:				
Dried, of all kinds.....pounds.....	1,125,659		952,094	
Fresh.....		6,652.51		12,711.30
Glass, window.....		74,895.44		99,154.94
Glassware of all kinds.....		157,382.61		201,117.85
Ghee.....pounds.....	667,994		356,200	
Haberdashery and millinery.....	2,398,208.80		2,336,932.23	
Hardware, cutlery, and ironmongery.....	1,477,484.00		1,996,535.16	
Hats of all kinds.....dozen.....	26,235		24,396	
Hoes and picks, Kaffir.....number.....	65,106		63,718	
Hops.....cwts.....	1,067		1,043	
Hulls of ships, masts, spars, sails, etc.....		26,089.31		31,651.72

Articles.	1898.		1897.	
	Quantity.	Value.	Quantity.	Value.
Hosiery.....		\$131,395.50		\$334,021.96
India rubber, manufactured.....		2,783.64		3,318.96
Instruments:				
Mathematical and scientific.....		16,680.17		13,124.95
Musical.....		148,283.26		168,921.09
Iron:				
Bar.....tons...	2,304		4,634	
Hoop.....do...	200		99	
Pig.....do...	410		150	
Sheet, not corrugated.....do...	750		1,571	
Corrugated and galvanized.....do...	8,345		9,169	
Pipes and piping.....		95,928.45		40,742.34
Anchors and chain cables.....		788.37		2,340.79
Wire for fencing.....		132,582.93		309,918.19
Lard.....pounds...	427,205		229,297	
Lead:				
Bar and sheet.....cwts...	1,840		2,604	
Tea.....tons...	44		84	
Leather:				
Manufactured.....		1,197,421.79		1,282,361.68
Unmanufactured.....		10,093.12		18,541.37
Saddlery and harness.....		187,924.76		188,779.55
Linens and linen manufactures.....yards...	200,447		220,407	
Machinery and component parts of machinery of all kinds.....		1,489,319.33		1,496,585.01
Manures.....		30,016.57		31,476.52
Matches.....gross...	206,337		190,048	
Meats:				
Salted and cured, not hermetically sealed.....pounds...	24,005		11,036	
Chilled or frozen—				
Beef.....do...	802,581		64,052	
Mutton.....carcasses...	27,832		6,037	
Do.....pounds...	1,318,093		138,385	
Pork.....do...	6,767		2,385	
Game.....crates...	180		190	
Poultry.....do...	210			
Oils:				
Paraffin.....gallons...	1,392,405		1,146,286	
Linseed.....do...	55,031		65,167	
Lard.....do...	2,877		16,100	
All other kinds.....do...	593,860		309,225	
Painters' colors and pigments.....		109,883.37		102,430.96
Paper for newspaper and book-printing purposes.....		58,419.44		82,175.72
Perfumery.....		9,037.09		21,269.34
Plate, jewelry, and plated ware.....		161,431.54		349,201.33
Provisions and oilman's stores:				
Fish, salted and cured.....pounds...	358,427		200,437	
Fruits (bottled and tinned), pickles, sauces, preserved vegetables, etc.....pounds...	1,233,291		1,005,978	
Hams and bacon.....do...	847,676		779,474	
Jams.....do...	510,308		735,646	
Meats, preserved and salted.....do...	2,315,687		3,200,398	
Tinned fish.....do...	798,017			
Milk, condensed.....do...	4,434,986		4,655,000	
Oilman's stores and provisions not otherwise specified.....		420,752.72		569,098.24
Quicksilver.....pounds...	4,541		19,760	
Railway and tramway material.....		174,556.49		282,242.40

Articles.	1898.		1897.	
	Quantity.	Value.	Quantity.	Value.
Rice.....cwt.....	299,645		135,811	
Salt:				
In bags.....tons.....	6,020		3,341	
Rock.....do.....	60		40	
Other packages.....		\$700.78		\$632.65
Salt peter.....cwt.....	268		245	
Seeds:				
Garden.....		43,560.04		15,271.08
Bulbs and plants, living.....		3,489.28		5,168.22
Sheep dip.....		94,176.59		40,026.96
Silks.....		30,761.35		49,409.57
Soaps of all kinds.....cwt.....	53,687		40,432	
Spices.....		18,113.11		6,995.57
Spirits:				
Brandy.....gallons.....	44,331		43,732	
Gin.....do.....	79,841		126,391	
Rum.....do.....	1,945		3,110	
Whisky.....do.....	148,827		140,943	
Wine.....do.....	2,219		60	
Sweetened and perfumed.....do.....	9,502		10,371	
Methylated.....do.....	2,019		1,690	
Stationery.....		238,954.88		310,273.44
Books and music, printed.....		153,197.42		129,385.64
Steel.....		180,323.35		134,145.07
Sugar:				
Refined.....pounds.....	759,198		497,483	
Unrefined.....cwt.....	847		41,704	
Tallow and grease.....do.....	9,427		6,392	
Tar, pitch, and asphalt.....		21,256.87		25,262.00
Tea.....pounds.....	434,719		386,351	
Telegraph materials.....		169,154.67		66,072.47
Tin and tinwares:				
Block and ingots.....		4,968.70		5,411.55
Plate and sheet.....cwt.....	1,420		3,800	
Other kinds.....		32,196.77		14,901.22
Tobacco:				
Manufactured.....pounds.....	137,150		157,444	
Unmanufactured.....do.....	105,391		89,253	
Cigars.....do.....	54,914		61,046	
Toys, turnery, and fancy ware.....		162,896.36		1,47,902.67
Uniforms and appointments.....		17,110.61		2,520.85
Vegetables, onions, and potatoes.....		39,078.00		25,159.81
Wine:				
In bottles.....gallons.....	33,669		47,724	
In wood.....do.....	41,698		27,341	
Wood and timber:				
Unmanufactured.....cubic feet.....	1,687,052		4,186,492	
Manufactured—				
Boards and planks.....do.....	1,552,822		1,394,283	
Other than furniture.....		179,130.99		284,291.20
Woolen manufactures:				
Cloth and flannel.....yards.....	188,187		120,147	
Blankets and rugs.....pairs.....	280,617		275,867	
Shawls, etc.....		63,741.42		47,837.70
Zinc and spelter.....cwt.....	3,500		5,614	
Goods, unenumerated, by parcel post.....		185,204.59		224,550.04
All other articles.....		802,519.		557,939.36

The consul-general adds:

The total value of imports for 1898 was £5,323,216 (\$25,905,430.66), and for 1897, \$29,120,780.75. This is exclusive of bullion and specie, the value of which was £35,898 (\$174,697.62) in 1898 and \$79,447.27 in 1897.

The total exports of the colony of Natal for 1897 were:

Description.	Value.	
Colonial.....	£1,004,064	\$4,886,277.46
Noncolonial.....	1,180,603	5,745,404.50
Total.....	2,184,647	10,631,681.96

The total in 1897 was \$7,893,131.58.

These figures are exclusive of coin.

COAL IN NATAL.

Consul-General Stowe sends from Cape Town, January 17, 1899, copy of the report made by a commission appointed to investigate the coal industry of Natal, extracts from which are as follows:

The existence of extensive coal deposits in Natal had been a matter of common knowledge for a considerable number of years; it was not, however, until the early part of 1880 that any practical steps were taken with a view to opening up the latent mineral wealth of which the colony was known to be possessed. In that year, the governor issued instructions for the drawing up of a report upon the coal measures of the colony. This work was intrusted to Mr. Frederic W. North, F. G. S., and his report deals with the subject in a most comprehensive manner and remains to-day the standard treatise upon the coal deposits of the colony. Mr. North ascertained that the workable coal-mining area of Natal, situated in the county of Klip River, comprises a superficial extent of 1,350 square miles, and, assuming an average thickness of 4 feet, with a deduction of 50 per cent allowed for faults, worthless coal, and barren ground, he estimated the available deposit at 2,073,000,000 tons. Mr. North expressed the opinion, based upon actual experience, that, although Cape Colony possessed coal sufficient for its own locomotive requirements, it had none equal in quality to that of Natal, and predicted a future export trade with the Cape, which it is now hoped will be realized.

There are, at the present time, some twelve or thirteen collieries putting out a regular supply of coal, the output varying (as indicated by the official returns for August last) from 100 tons by one company to 17,088 tons by another. The total output of coal for the month in question was 39,334 tons, being the highest output on record. With the exception of two or three of the working companies—which have been floated with foreign capital—all the collieries are owned by local companies and controlled by boards of directors in Natal, or worked by private individuals.

The price charged for Natal coal has been from the commencement of the industry practically 10s. (\$2.433) per ton at the pit's mouth; while for several years consumers making contracts for large quantities were allowed a rebate varying from

6d. to 1s. per ton, thus bringing the price for such contracts down to 9s. (\$2.10) per ton at the mine.

The labor difficulty is one of the principal factors in the industry. Among the items which enter into the cost of production is the price paid for explosives. In the case of a few mines, explosives are not largely used, owing either to the nature of the roof or to the presence of gas in the drives; but, in the majority of cases, blasting is largely resorted to, and expenditure for powder, dynamite, or other explosive becomes an appreciable charge. Two companies alone, during nine months of this year, expended £2,882 (\$14,000) on blasting powder, in addition to expenditure for other explosives. The price of blasting powder, the supply of which is under direct government control, is higher than would have been the case had the extensive use of gunpowder for industrial purposes been contemplated at the time the regulations under the law were framed. The cost of blasting powder and of coarse powder (Rhinoceros brand) is:

Description.	Cost per pound.			
	Blasting.		Coarse.	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Cost in England.....	0	4	0	6½
Customs duty in Natal.....	0	6	0	6
Freight.....	0	0½	0	0½
Shipping and agents' charges, interest, and exchange.....	0	0½	0	0½
Total	0	11	1	1½

From all evidence, it appears that there is available in Natal a practically unlimited supply of coal in every way suitable for marine, railway, and general purposes, the excellent quality of which has been proved by experience. It has been used on the mail steamers and direct liners with highly satisfactory results, while favorable opinions regarding the coal have, it is understood, been expressed by the engineers belonging to those of Her Majesty's ships which have recently coaled at the port; and the testimony of the railway department regarding the practical value of the coal in the working of the railways is in every way most satisfactory. Excellent results have been obtained from official tests made on the railway from time to time. Natal coal is considered by experts to be quite equal to the best North Country coal, and only from 12½ to 15 per cent inferior to best Welsh coal. There is thus no reason why the local product should not be able to hold its own as far as quality is concerned, provided that proper care is exercised in the processes of sorting and screening. There can be no doubt that, during the earlier stages of the industry, the importance of paying the strictest attention to the quality of the coal turned out was not fully recognized; but it is very satisfactory to know that, in most of the mines at the present time, neither care nor expense is spared to insure the supply of clean and well-screened coal, and in many cases special plant of the most modern description has been provided with this end in view.

The disability under which Natal coal labors in competition with the foreign product is the comparatively greater distance over which it has to be conveyed by rail. It is this fact which must be regarded as the argument in favor of some further concession in the rate of railway carriage being granted to what may justly be termed the foremost colonial industry.

The coal-shipping trade may be divided into two classes, viz, coal for bunkering

purposes (*i. e.*, for the use of the steamer supplied) and coal for export to other places. The former has already reached considerable proportions; the export trade has yet to be opened up. The present demand for bunker coal is limited to the requirements of vessels trading to and from the port, but passing steamers may, if sufficient inducement offers, find it advantageous to call here for the purpose of coaling. The bunker trade, at the present prices ruling at the port, has practically reached its maximum; but there is a fair probability, given a sufficient reduction in cost and other facilities, of attracting here, to replenish their bunkers, steamers engaged in the eastern trade. But, even in the event of the present bunker demand being augmented by this additional trade, the outlet would still be insufficient to carry off the present possible output.

The port facilities are, on the whole, satisfactory, and not, under the circumstances, capable of any great improvement. Steamers replenishing their bunkers at the wharves are coaled by practically the same methods as those adopted at all the large coaling ports in other parts of the world. The coal trucks are shunted onto the wharf alongside the vessel, and the coal is conveyed on board in baskets by gangs of native laborers. In cases where quick dispatch is required, this method is supplemented by the employment of barges, moored alongside the steamer on the side farthest from the wharf, from which the coal, already bagged, is hoisted on board by the ship's winches; or, in the case of loose coal, carried on board the steamer in baskets in the same way as from the wharf. By coaling from the wharf and barges simultaneously in the manner described, as much as 1,000 tons have been put on board one steamer in twenty-four hours.

* * * * *

The question upon which the future prosperity of the coal industry of Natal must rest, if it is to attain proportions of any magnitude, is the possible demand which may be created in outside markets. Undoubtedly, the most promising outlet lies in an export trade with the Cape. The consumption of coal in the neighboring colony is very considerable, no less than 600,000 tons being imported annually, in addition to that produced in the country; and, given the facilities required for the transport and shipment of coal and moderate sea freights, there is every reason to believe that Natal might secure a substantial share of this trade. The question of an export trade with the Cape is entirely one of cost. Welsh coal costs at Cape Town from 28s. to 30s. (\$6.80 to \$7.29) per ton f. o. b., according to the fluctuations of the freight market, and it is estimated that Natal coal would have to be delivered at about 5s. (\$1.21) per ton less than Welsh, in order to secure a market. In the case of coal for local consumption at Cape ports—for which there is a demand of about 50,000 tons per annum—Natal coal would have the advantage, under the conventional tariff, of 3s. (72 cents) per ton of 2,000 pounds.

The average rate per ton per mile in the different countries is:

	Pence.
Natal	0.5 = \$0.01
Netherlands	.5 = .01
Cape Colony.....	.57 = .0115
New South Wales.....	.63 = .0127
New Zealand.....	1.25 = .0253
America.....	.68 = .0137
England.....	.57 = .0115

It is recommended that the railway rate for coal in Natal be generally reduced by 10 per cent, or from 0.5d. to 0.45d. (1 cent to 0.9 cent) per ton per mile; and that in the case of coal bona fide exported from the colony or taken into bunkers at the outer anchorage, a rebate of 33½ per cent upon the railway rate be granted.

TEA IN NATAL.

On my recent visit to the South African exhibition, I took pains to post myself on the present tea industry of the colony of Natal. I think the time may not be far distant when steamers from the United States will be able to obtain return cargoes, instead of going, as at present, to the Far East, or being forced to return from South African ports in ballast.

With an assurance of return cargoes, it is said, freight from the United States here would be cheaper.

To Mr. William R. Hudson, of the Clifton Tea Estate, the credit of the present tea industry is due, and the estate now comprises 3,000 acres on the Nonoyoi River, 55 miles from the city of Durban, the river furnishing the necessary water power. Coolie labor is used in preference to that of the Kaffirs. A coolie can pick 42 pounds of green leaf per day; the Kaffir only 19 pounds. The present factory building is 200 by 80 feet, three stories high, and is fitted up with the latest machinery. All the chests are made on the premises; a coolie will make 40 chests, each capable of carrying 60 pounds of tea, or 60 boxes, each holding 14 pounds of tea, in a day. A "chest" measures 19 by 22 by 11 inches, the wood being three-eighths of an inch thick. A "box" is 12 by 10 by 11 inches, the wood being the same thickness. A chest takes 32 nails, and a box 24 nails. These figures will give some idea of the amount of skill and labor required to attain the results mentioned. A male adult Indian's labor, on an average throughout the year, costs 25 cents per day. The Indian's indenture lasts five years, after which term his services can again be secured for a further period of three years, on terms agreed to between master and man.

The picking season in Natal commences generally early in September and goes on till about the end of the following May. The months of June, July, and August are taken up with digging and manuring the land and pruning the plants. The tea is picked by the coolies, mule carts in different gangs collecting the leaf. Men and women are employed in the picking process. The tea leaf is taken down to the factory, where it is "weighed in." When that is done, it is spread out thinly on frames covered with hessian, for the purpose of "withering," in a temperature of 85° to 90°. In the course of twelve hours, the leaf has become perfectly soft, and produces the same sensation to the touch as a silk handkerchief. The leaf is then passed through shoots into the machine room, where it is "rolled," the object of this process being to break up the juice

cells in the leaf and to give the leaf that peculiar twist characteristic of the tea seen in ordinary commerce. When the rolling is finished, the sappy, juicy mass is sent down into the cooling chamber, where it is spread out and submitted to the action of the air at a temperature of from 60° to 70°. This is the critical stage in the manufacture of tea. The eye of the experienced manager is required, to see that the fermentation is arrested at the exact time, or the tea would lose quality and would acquire an undesirable flavor. The rolled leaf is then passed to drying trays, in which it is spread out thinly and submitted to a temperature of about 250°, the excessive heat staying fermentation and taking all moisture out of the leaf. The now manufactured article is sent on to the sorting department, where the different grades of Golden Pekoe, Flowery Pekoe, Pekoe Souchong, Souchong, and dust are separated by machinery, which consists of a huge revolving screen cylinder, the meshes gradually getting larger toward the outer end, so that the "dust" falls from the separating machine first and the coarsest leaf, the "Souchong," last. It should be pointed out that the smallest leaves on the twig, when picked, make the finest tea.

The tea is then put into air-tight bins, where it is allowed to remain for from two to three months to mature. After this, it goes to the packing department, where it is put into packets or boxes for the trade. This year's output of tea from the estates in Natal is estimated at from 300,000 to 400,000 pounds, for which there is a ready market; and it is estimated that the next crop will yield 1,250,000 pounds of tea.

J. G. STOWE,
Consul-General.

CAPE TOWN, *January 4, 1899.*

NOTES.

Japanese in Foreign Countries.—Consul-General Gowey sends from Yokohama, February 20, 1899, the following clipping from the Japan Mail, of even date:

JAPANESE EMIGRATION.

In one or two instances, such as those of Thursday Island, Hawaii, and the disastrous case of Peru, public attention has been directed to Japanese emigration; but for many years past there has been a steady and quiet outflow of population which has certainly not attracted the notice it deserves. The Jimmin publishes an interesting and instructive table, showing the number of Japanese subjects actually residing in certain foreign countries at the end of 1897:

Residing in—	Males.	Females.	Total.
San Francisco and neighborhood.....	5,212	269	5,481
Tacoma and neighborhood.....	79	3	82
Seattle, etc.....	387	61	448
Portland, etc.....	461	60	521
Idaho, etc.....	385	27	412
Vancouver, etc.....	402	21	423
Victoria.....	214	7	221
Union Coal Mines.....	291	7	298
Hongkong.....	122	125	247
Singapore.....	158	456	614
Thursday Island.....	991	53	1,044
Townsville.....	1,413	60	1,473
Vladivostock.....	890	717	1,607
Hawaii.....	21,470	5,884	27,354
Seoul.....	1,077	790	18,667
Chemulpo.....	2,285	1,664	3,949
Gensan.....	862	561	1,423
Fusan.....	3,397	2,670	6,067
Shanghai.....	492	331	823
Total.....	40,608	13,766	54,374

Copper Trade in Japan.—Under date of February 16, 1899, Consul-General Gowey transmits from Yokohama a clipping from the Japan Times of even date, as follows:

COPPER MARKET AND HOME CONSUMPTION.

The copper market continues to present a very brisk aspect, owing to an active demand for the export. Markedly increased as the output has recently become, so extraordinary is the demand for the metal that the prospective yields of the principal copper mines in Japan are already covered by contract; so that for want of the commodity, the transaction is said to be practically suspended in Tokyo and Yokohama. The amount of consumption at home has lately advanced apace, chiefly

owing to the notable development of the electric business. Subjoined is a table showing the consumption of home and imported manufactured copper, quoted from the Chugai Shogyo:

Year.	Home produce.		Import.		Total.	
	<i>Catties.*</i>	<i>Pounds.</i>	<i>Catties.*</i>	<i>Pounds.</i>	<i>Catties.*</i>	<i>Pounds.</i>
1892.....	4,473,000	5,860,000	58,000	76,000	4,531,000	5,936,000
1893.....	4,458,000	5,840,000	5,000	7,000	4,464,000	5,848,000
1894.....	7,770,000	10,179,000	39,000	51,000	7,810,000	10,231,000
1895.....	7,669,000	10,046,000	119,000	156,000	7,789,000	10,204,000
1896.....	9,279,000	12,155,000	152,000	199,000	9,431,000	12,355,000

* 1 catty = $1\frac{1}{2}$ pounds avoirdupois.

Coffee and Sugar Crops in Java.—Consul Everett sends from Batavia, February 7, 1899, printed statistics of the coffee and sugar crops of Java, as follows:

Estimate of private coffee crops.

Kind.	Yield in 1898.		Estimate for 1899.	
	<i>Piculs.</i>	<i>Pounds.</i>	<i>Piculs.</i>	<i>Pounds.</i>
Liberia	63,007	8,568,952	84,004	1,424,544
Java	138,833	18,881,288	365,241	49,672,776

Sugar production.

Year.	Quantity.	
	<i>Piculs.</i>	<i>Pounds.</i>
1894	4,474,721	608,562,056
1895	5,032,465	684,415,240
1896	4,498,652	611,816,672
1897	4,893,674	665,539,664
1898	6,313,042	858,573,712

Dynamite Factory in the Transvaal.—Consul Macrum writes from Pretoria, February 4, 1899, that he has recently visited the dynamite factory. The company has an initial investment in ground and buildings of £600,000 (\$2,919,900) and carries a stock of from £700,000 to £800,000 (\$3,406,550 to \$3,893,200) at all times. The Government granted this company the sole right to import, manufacture, and sell explosives in the State for a period of fifteen years, of which about five have passed, the Government receiving a royalty from every case sold. Much opposition is shown to the monopoly by the mining companies on the Rand and elsewhere in the State, as they make the claim that, while they pay about £3 15s.

(\$17.84) for No. 1 dynamite now, if the monopoly was canceled the same quality could be laid down at the mines at not more than £2 5s. (\$11.96) per case of 50 pounds, allowing the Government a reasonable import duty. Mr. Macrum sends copy of the report of the State analyst on the factory.*

Hardware in Lourenço Marquez.—Consul Hollis, of Lourenço Marquez, under date of March 9, 1899, writes:

Until recently, the dwelling houses in this town have been constructed upon the most primitive plans. They are, for the most part, merely boxes of galvanized corrugated iron, with inner walls, ceilings, and partitions of half-inch matched spruce boards. They contain no kitchens, bathrooms, hot or cold water pipes, stoves, or chimneys. The kitchens are generally galvanized-iron shanties in the rear of the main buildings. As this place is getting more civilized, a demand is arising for a better class of houses. I recently had a talk with the leading builder and contractor here, Mr. William Blackwood. He told me that he wished to obtain full particulars relating to the following articles, which, I assured him, could be purchased at better advantage in the United States than anywhere else: Lead, steel, and brass piping; water-closets, mosaic tiles, kitchen plumbing outfits, hot-water boilers and connections, sinks, stoves for burning soft coal and with hot-water connections, 200 to 300 gallon iron water tanks, outside galvanized-iron guttering and piping; builders' fine hardware, such as locks, knobs, hinges, bolts, nails, screws, and special tools.

Russian Council of Commercial Navigation.—Consul-General Holloway writes from St. Petersburg, March 2, 1899:

I give below translation of a report in the Commercial Gazette of a meeting of the council of commercial navigation of the Department of Trade and Manufactures, held in this city February 24, 1899:

At the meeting of the council, held under the auspices of the Grand Duke Alexander Michaelovich and Admiral Chihacheff, important measures, proposed by the department of commercial navigation for improving Russian shipbuilding, were discussed. The main point of the measures proposed to the council consisted in admitting into Russia free of duty, for a period of ten years, foreign iron and steel for building sea vessels, which have been imported duty free since April 27, 1898. In order to facilitate the application of the above measures and the control by the custom-house of the materials imported for shipbuilding purposes, it is proposed to fix a limited period during which iron and steel may be imported duty free. As

* Filed for reference in Bureau of Foreign Commerce.

a guaranty, the shipbuilder will pay a certain sum, which will be returned to him when the vessel is completed. Besides, it is proposed to import duty free whole parts of the mechanisms for vessels, such as are not manufactured in Russia, viz, cylinders exceeding 10 inches in diameter, windlasses for anchors, and steam helm apparatus.

Representatives of the several iron and shipbuilding factories of Russia who took part in the meeting were of the opinion that the above measure would be of no benefit to the Russian shipbuilding industry, if other materials used for building vessels are not admitted duty free. They also recommended a premium for every vessel built in Russia. This latter question was not seriously discussed. There was considerable opposition to the proposition to admit completed machinery free.

Before these measures become laws, they must first be confirmed by the Minister of Finances, then by the council of ministers, and finally by the Emperor. This will require six months.

Electrical Works in Brussels.—Consul Roosevelt writes from Brussels, March 13, 1899:

Statistics show that in 1893, 3,030 lamps met the requirements of consumers of electricity in the city of Brussels. At the present time, there are 66,000 lamps. In consequence of the constantly increasing use of electricity, the city has been obliged to enlarge its works. It is now proposed to acquire five new vertical machines of 1,000 horsepower, to be placed in works already supplied with five horizontal machines of 500 horsepower. The city also has electrical works established in the basement of the railroad building; but, owing to the steadily increasing use of electricity, the production is insufficient to meet public demands. In consequence, it has been decided to unite the two works by means of four cables inclosed in iron pipes. It was at one time proposed to erect a large electrical power house just beyond the city limits; but, as it was shown that about 15 per cent of the current would be lost, the proposition was rejected. The most practical method now seems to be the creation of new stations as the exigencies of the situation may demand.

Obstacles to American Bicycle Trade in France.—Under date of March 21, 1899, Consul Jackson, of La Rochelle, sends the following:

If American wheels were sold at prices approximating those for which they sell in the United States, they would be purchased in this part of France in large numbers. It seems to me a serious mistake on the part of our cycle makers to give the sole agency of their wares for all of France to any one house. The result of this is that the prices are maintained at a very high figure. Machines which have always been known in America as "low priced" sell for about

the same price as the most expensive at home. From figures recently shown me, one can buy certain wheels in New York at retail, pay the duty and transport, and then have them cheaper than the local dealer can purchase them from the agent at Paris. Consequently there is practically no competition in the market between American and French cheap wheels, and fewer American wheels are sold. The conditions which obtain here as to advertising, travel by railway, exhibition of goods, etc., are so different from those in the United States that it is an immense undertaking, if we demand high prices, to successfully introduce one particular "marque" to 39,000,000 people.

Insurance and Acetylene Gas in France.—Under date of March 21, 1899, Consul Skinner, of Marseilles, says:

A correspondent in Pennsylvania* asks information as to the requirements of the Government and the insurance companies in France concerning the use of acetylene-gas machines, which, he says, involve in his city the refusal of the companies to insure, unless the machines accord with their rules. I am advised by the leading manufacturer of acetylene-gas machines in Marseilles that users of the gas must apply for a permit at the prefecture of this department. This permit is obtainable without the slightest difficulty. If the machine is then installed within a building for which insurance is desired, an additional policy premium of 10 per cent must be paid. If, however, the machine is located outside of the building, the insurance companies impose no additional tax. Rules for the construction and placing of the gas machines are not prescribed either by the local government or the insurance companies.

Inland Navigation in France.—Consul Skinner writes from Marseilles, March 13, 1899:

The tendency in France continues to be in the direction of increasing and improving the interior water ways of the country, the most notable project now under discussion being the building of a ship canal to connect the Rhone with the city of Marseilles. At the present moment, one single railway company controls the vast traffic entering and leaving the city, and complaints of inadequate service and high rates are frequent. A connection with the Rhone would greatly relieve the situation.

There are in France thirty-nine rivers and fifty-two canals, the

* To whom Advance Sheets have been sent.

traffic of which amounted to more than 100,000 tons in 1897. Of these, fifty-five showed a tonnage exceeding 500,000 tons. The total tonnage of the navigable rivers amounted in 1897 to 13,553,350 tons, and that of the canals to 17,055,876 tons.

Germany's Exports to the Balkan Peninsula.—Consular Agent Harris sends from Eibenstock, March 17, 1899, the following translation of an article in the *Leipziger Tageblatt*:

The new German-Roumanian treaty brings to our attention not only the development of commerce between the two countries party thereto, but our relations to all the countries of the Balkan Peninsula—Turkey first of all, and the entire Orient in general.

Germany's exports thereto were:

Country.	1890.	1897.
Turkey	\$8,092,000	\$7,354,200
Roumania.....	12,709,200	7,877,800
Bulgaria.....	690,200	1,523,200
Servia.....	887,800	928,200

A comparison of the exports to Turkey and Roumania for the years 1890–1897 shows unfavorable results. During the intervening years, there has been a gradual decrease in the exports of wire, cement, hides, furs, locomotives, leather, and hosiery. The year 1898, however, proved to be a good one. The chief articles of German export to the Balkan states at present are iron, machinery, and textiles. To Turkey alone, the exports of 1898 show an increase of 50 per cent over those of 1897.

German Telephone Service.—Consul Schumann writes from Mainz, February 28, 1899:

The telephone service of this country is a public institution controlled and managed by the Department for Posts and Telegraphs. The rates are certainly very low, the charge for a local telephone being \$38.55 per annum, including the rental of the instrument. The service, however, is lacking in enterprise. I applied on February 20 to have a telephone placed in my residence, and was told that the connection could not possibly be made before May or June, as they did not string wires in winter.

Potato Bread for Horses in Germany.—Consul Hughes writes from Coburg, March 22, 1899:

Potato bread is used by the natives of Thuringia to feed their horses, especially when they are worked hard in very cold weather. The animals thrive on it, and their health and strength are excellent. The method of preparation is simple and inexpensive. The

potatoes are slowly stewed till soft; they are then mashed thoroughly, and an equal quantity of corn meal is added. It is mixed into a thick paste, with a small quantity of salt. The paste is then divided into 4-pound loaves and allowed to bake till thoroughly done. In the slow country ovens, it generally takes from fifteen to eighteen hours. When cold, they are fed to the horses and cattle doing heavy work at the rate of four loaves a day, viz, one in the morning, one at noon, one about 4 o'clock, and one at night. With the last, about 10 pounds of poor hay are given. It is claimed for this method that horses can do much more work on the same amount of food, and that it is good for their teeth.

A New Industry in Scotland.—Consul Fleming writes from Edinburgh, April 3, 1899:

In the course of the next three months, a wood-carving factory will be started in Menstrie, Clackmannan County. A syndicate has purchased a large building which will be fitted up for the purpose as soon as possible and equipped with the necessary machinery. This will be the first factory of the kind in Scotland. One of the members of the syndicate is Mr. Alexander McNab, of Middleton Kerse, Menstrie, whom I have furnished with the names and addresses of a number of American manufacturers of wood-carvers' tools and wood-working machinery.

Scottish Criticism of American Linseed Cake.—Consul Fleming, of Edinburgh, under date of March 20, 1899, writes:

Since January 1, 1899, there have been imported from the United States to this market 26,000 bags of cotton-seed meal and 8,000 bags of cotton-seed cake. While the sales of our cotton-seed products here have become important and are increasing, the linseed cake imported is almost wholly Russian. I have asked dealers in these articles why American linseed cake has not yet competed successfully with the Russian product. The answer uniformly given is that too much of the oil is taken from the American linseed cake in the process of crushing; in other words, as one commission merchant puts it, "the life is crushed out of the cake." It is the common opinion here that if the American producers of linseed oil would "ease up" the crushing machines, competition with Russia for the trade in linseed cake would not be nearly as difficult as it is at present. I am simply offering the Scottish dealers' view of the subject as a suggestion, which may or may not be new or practicable.

Petroleum Refinery in Norway.—Under date of March 20, 1899, Consul Nelson, of Bergen, says:

A prominent foreign chemist, who has been connected with the Nobel petroleum refinery in Baku, has, according to the *Aftenposten* (a leading Christiania paper), discovered a new method of refining which appears to be an improvement on the process now applied in Baku. The right to use the patent has been offered to a Christiania company, and some time ago a committee was appointed to investigate the matter. The committee reported favorably on March 9, and the enterprise, which will involve an expenditure of about 1,000,000 kroner (\$268,000), will soon be inaugurated. The factory will cost about 250,000 kroner (\$67,000) and will be built near Christiania. The output of refined oil, it is calculated, will amount to 20,000,000 kilograms a year. It is intended to obtain the raw material from Baku. It is possible that our manufacturers can supply machinery for the factory. Purchases in this line are now made chiefly in Germany.

Reindeer in Sweden.—In a report prepared at the instance of the Interior Department (the original has been transmitted), Consul-General Winslow, of Stockholm, under date of March 3, 1899, says, in part:

The only food given reindeer in Sweden is "reindeer moss," a lichen highly prized by the Laps, growing abundantly in the Arctic regions, almost as luxuriantly on the bare rocks as in the soil. It covers extensive tracts in Lapland, making the landscape in summer look like a field of snow. The domesticated reindeer are never as large as the wild ones; Siberian reindeer, domesticated, are larger than those of Lapland. No care is taken of the deer; they thrive best by being permitted to roam in droves and obtain their own sustenance. The moss is capable of being used for human food; the taste is lightly acrid. Attempts have been made to feed hay, roots, grain, etc., to the reindeer, but they have not succeeded.

Wheat in Spain.—Mr. Mertens, in charge of the United States consular agency at Grao, writes, under date of March 25, 1899:

Referring to my report of January 20, 1899,* I have the satisfaction to state that another steam cargo of 428 tons of hard red wheat has just arrived here from New York, which supports my opinion that American wheat stands a fair chance of reception in Spain, in

* See CONSULAR REPORTS No. 223 (April, 1899), p. 705.

spite of the disadvantages in the customs tariff compared with imports from other countries.

Under date of April 8, Mr. Mertens adds:

A delegation of millers and flour merchants went to-day from Barcelona to Madrid to ask of the Minister of Finance the temporary abolishment of all import duties on foreign wheat. The result of this appeal should be closely watched through the daily press by our grain exporters, and they should have everything prepared to be quick with their offers, in case the Spanish Government grants the desired free introduction *pro tem.* of foreign grain.

Sesame in Syria.—Consul Ravndal sends from Beirut, February 17, 1899, a description of the preparation of sesame oil in that country. The grain, he says, is soaked in water for twenty-four hours and then placed in an oblong pit coated with cement, in which two men work a wooden hammer of 20 pounds weight. Efforts are made not to mash the kernels. The skins are separated in a tub of water salted to a degree sufficient to float an egg; the bran sinks while the kernels remain on the surface. The sesame seeds are then broiled in an oven and sent to the mill to be ground. From the millstone, the oil drops into a jar. It is thick, of a dark-yellow color, and sweet. The product is used extensively by the poorer classes in place of cheese, sirup, honey, etc., and is popular on account of its saccharine properties. Confectionery is made by mixing sesame oil with sirup and other elements. Sesame is widely cultivated in Syria. The average price is 8 cents per oke, or 2.72 pounds. The sesame grain is largely employed in flavoring pastry. The wholesale price of oil is at present 14 cents per 2.72 pounds.

Australian Butter Trade.—Under date of Cape Town, February 25, 1899, Consul-General Stowe submits the following statistics relative to the butter trade of Australia and South Africa:

The largest consignment of butter in one vessel (700 tons) which ever left Australia recently sailed in the *Austral* for England. The *India* had also on board 438 tons, so that in one week Melbourne has earned the credit of sending out the largest shipment of fresh butter which ever left any port in the world. Including a small consignment for Cape Town, the shipment comprised 54,000 boxes of butter. As an experiment, 800 dozen eggs were included among the produce for this port. The value of the butter and some 20,000 rabbits on board for England was \$676,443.50. I call attention to this for the reason that my efforts to induce the producers of the United States

to ship butter has met with but little success, although, as mentioned in a recent report,* butter has arrived in South Africa from the United States under Australian marks. The total import of butter into South Africa (with the exception of Portuguese territory) for 1898 was 5,782,017 pounds, against 5,901,455 pounds for 1897; showing a decrease.

Notes from Salvador.—Under date of March 3, 1899, Consul Jenkins, of San Salvador, writes to a trade journal† in New York, as follows:

The fall in the price of coffee and the speculative spirit that led to overstocking the market have brought about the present financial depression. The demand for any class of goods can not be stated, as the depression is general in character. The best houses have agencies in the United States which buy and discount their own bills. From my observation, I do not believe that the giving of credits is the best method of promoting trade. The competition for business has been very keen, and European houses have succeeded in obtaining the lion's share; but the result has been that they are compelled to suspend. A thorough advertising and exhibition of goods will, in my opinion, accomplish far more than credit. It must not be understood that there is no future here for American trade. I believe that in time prosperous conditions will again prevail in Salvador.

Meat Products of Uruguay.—Consul Swalm sends from Montevideo, under date of February 24, 1899, a report in regard to the exports of meat products from Uruguay to Cuba and Puerto Rico and the possibilities of competition on the part of United States packers. It appears that during the present slaughtering season, 300,000 head of cattle have been killed in Uruguay, the prices averaging \$15 per head. Fat cattle are not so much used in the making of jerked beef (which is the chief article of export in this line) as are cows and lean steers. The buyer in Uruguay pays only about one-third for his raw product on the hoof that competitors must pay. Climatic conditions also favor the handling of the product. Shipments are made chiefly in small Spanish vessels, and freight rates are low. The freight quoted on the day of report, by steamer, via New York, was 35s. (\$8.52) per ton for Cuba and 40s. (\$9.73) for Puerto Rico, 10 per cent primage being added in both cases. The amount of jerked beef shipped to Cuba since the war has been 4,171,228 pounds, valued at \$246,360. The full text of Consul Swalm's report has been sent the Department of Agriculture.

* See CONSULAR REPORTS No. 220 (January, 1899), p. 23.

† Advance copy of report has been sent the editor.

Mining Industry in Mexico.—The secretary of the embassy at Mexico, Mr. McCreery, sends, under date of April 3, 1899, copy of the message of President Diaz on the opening of Congress, from which the following paragraphs in regard to mining matters are taken:

The mining industry is that which affords most evidences of rapid progress, as in the period covered by this report 1,040 title deeds, covering 11,408 pertenencias of 1 hectare* each, have been issued. The total number of title deeds issued, subject to the new legislation of June, 1892, is 9,353, covering 77,774 pertenencias of 1 hectare each.

The exportation of ore has also increased to a noteworthy degree. Taking the figures recently published by the Department of Finance for the seven months July to January of the present fiscal year, it appears that the value of the exportation of mineral products, metallic and nonmetallic, was \$54,311,000 in round figures, showing an increase of \$1,043,000 over the value of the same products exported in the corresponding period of the previous year.

As an important event in the mining industry, I will state that the Adventurer Tunnel at Batopilas, which is nearly 3 kilometers (1.86 miles) in length, which has been fifteen years under construction and has cost millions of dollars, has just struck the principal lodes of the camp.

Packing for Venezuela.—Consular Agent De Sola writes from Caracas, under date of February 15, 1899:

I can not too strongly urge United States manufacturers to effect a radical change in their system of packing. The cases and crates are in many instances not strong, but are very heavy, owing to the thickness of wood employed. This is prejudicial, not only on account of the breakage, but because the customs duty in this country is collected on the gross weight.

Exports of Cutlery to Cuba.—Consul Johnston writes from Sheffield, March 9, 1899:

The value of declared exports to Cuba from this district last month was £173 10s. (\$844.33). The articles shipped were pen-knives, with ivory, pearl, shell, and stag scales; razors, with bone and ivory handles; and scissors. The shipments were made to Habana as the port of entry.

Sickness at Dawson City.—Consul McCook writes from Dawson City, February 28, 1899:

Sickness is on the decrease here. The citizens' relief committee is some \$1,600 in debt, and has temporarily suspended work; the local authorities are, however, taking care of all destitute sick sent

* 1 hectare=2.471 acres.

to them. Several hundred went out over the ice this month, preferring that to being sent out. This will relieve the situation somewhat, but there will be a good many stranded in the next two months. Sixteen men came here yesterday from Forty-Mile District, stating that they had worked unsuccessfully on claims all winter, until their supplies were exhausted. They applied to me for help, so that they could go out over the ice. After the 1st of May, employment will be given to more men than at present; their services will be utilized in shoveling the dumps into the sluice boxes, for washing out the gold.

Canadian-Australian Cable.—Under date of April 15, 1899, Consul Dudley writes from Vancouver in regard to the cable that is to be laid from that city to Fanning Island and thence to Australia and New Zealand. The capital stock of the enterprise, he says, has been divided into eighteen parts. Of this, it is said that the colonies of Australia and New Zealand will take eight-eighteenths and the Governments of Great Britain and the Dominion of Canada five-eighteenths each. The work of laying the cable will begin this summer.

Cultivation of Rushes for Mats in Japan.—In reply to inquiries by a Massachusetts correspondent,* Consul-General Gowey, on February 20, 1899, writes from Yokohama:

The plant used in Japan in the manufacture of straw carpets or matting is known as igusa or goza gusa (*Juncus effusus*), a species of rush widely distributed throughout the northern hemisphere. Its cultivation resembles that of rice. It grows in rows in swampy ground and is propagated by means of rhizoma cuttings. It is set out in the spring and harvested in August, when about 3 feet high. It is cut close to the ground, dried, and put under cover until needed, when it is moistened, and the epidermis is then rubbed off with ashes.

Demand for Corn in China.—A telegram has been received from Consul Fowler, of Chefoo, dated April 14, 1899, requesting cable bids for 60,000 bushels best shelled yellow corn, to be delivered in Chefoo within ten weeks. All charges are to be included in the bids, and the payment is to be made c. o. d.

* To whom Advance Sheets have been sent.

Regulation of the Grain Trade in Russia.—Under date of February 28, 1899, Consul Smith, of Moscow, says:

With a view to regulating the grain trade, Mr. D. J. Bodiscow, an official of the Ministry of Agriculture, has been appointed by the Ministry of Finance and ordered abroad, to collect information regarding the condition of the grain trade in other countries and the extent of business that foreign buyers have with Russia, principally in Belgium and Germany.

Chart of Russia at Paris Exposition.—Under date of February 27, 1899, Consul Smith, of Moscow, writes:

An extensive chart of Russia is to be exhibited at the Paris Exposition, on which will be shown the extent of different trades in Russia. The chart will be prepared by a commission appointed by the pedagogical department, and will show the different trades taught in the Russian schools, such as wood carving, mechanical work, art, etc. This chart is expected to be of great interest, as it will show the degree of progress made in Russia.

English Market for Berries.—Consul Brush writes from Clifton, under date of March 16, 1899:

Mr. C. C. James, deputy minister of agriculture for the Dominion of Canada, is in receipt of the following letter from Mr. Harrison Watson, curator of the Imperial Institute. It indicates that fruit men may find a profitable market in England this year. Mr. Watson says:

I am keeping track of the raspberry-pulp trade. I learn that the Australian crop has again been practically a failure. One broker states that they are asking £45 to £50 per ton, and others that the Australians will have none to export. It is still too early to attempt to foretell the course of events, as everything must depend upon the English and Dutch crops. Speaking guardedly, I should think that the prospect for fairly high prices is on the cards, and Canadian raspberry packers should watch the market.

Production of Wine in Algeria.—Under date of March 8, 1899, Consul Skinner, of Marseilles, says:

The figures relating to the production of wine in Algeria show the steadily increasing importance of the industry. A very large proportion of the total production is received in France, where it is used in combination with other wines to produce the article which the trade requires. The crushing of 1898 is placed at 5,221,700 hec-

toliters, or, in round figures, 140,000,000 gallons. The area of the vineyards reached a total of 123,960 hectares, or 309,900 acres. In 1880, the production was 12,000,000 gallons; in 1888, 70,000,000 gallons; in 1897, 113,000,000 gallons.

Swine in Egypt.—In reply to an Illinois correspondent (to whom the letter has been forwarded), Consul-General Harrison writes from Cairo, under date of March 4, 1899:

Egypt being a Musselman country, the breeding of pigs is not an extensive industry. Pigs are raised chiefly by the Copts (Christians) of Upper Egypt, and are bought by Greek and German butchers for sale in the large towns where Europeans reside. Besides the native variety, a breed is imported from Malta. The native pig fattens with difficulty and rarely weighs over 250 pounds dead weight. Butchers pay $12\frac{1}{2}$ cents per oke (2.72 pounds) live weight for young pigs. The animals are fed on maize, beans, clover, and kitchen waste.

License and Stamp Act of Cape Colony.—Consul-General Stowe writes from Cape Town, February 23, 1899:

Referring to my report of January 6, 1899,* I have to state that the recent license and stamp act will be inactive until Parliament reassembles, when amendments will be passed that will make the act more acceptable to the interests of the commercial element of the colony. As our exporters may have been apprehensive of the effect of the act upon their interests, I hasten to report the change.

Treatment of Insane in Belgium.—Consul Winslow writes from Liege, March 8, 1899, in regard to the system of caring for the insane in Belgium, which, he says, is original with that country. The patients are placed in quiet villages and are cared for in the homes of the citizens, who receive 27 cents per day for the food, clothing, and care of each patient. Only the harmless insane are admitted to these colonies, and a medical director has charge of each. There is also an infirmary for the sick. The patient is allowed all possible liberties, and is made to feel that he belongs to the family in which he resides. In one colony in the province of Liege, 15 per cent of the afflicted have been entirely cured by this treatment and the condition of others much improved.

* See CONSULAR REPORTS No. 223 (April, 1899), p. 699.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
E. Schneegans, Saigon.....	Feb. 28, 1899	Rice market.....	Department of Agriculture.
Do	Mar. 14, 1899	do	Do.
Arthur Donn Piatt, Dublin..	Apr. 11, 1899	Agricultural statistics.....	Do.
M. H. Twitchell, Kingston, Canada.	Apr. 20, 1899	Agricultural conditions.....	Do.
A. G. Seyfert, Stratford.....	May 2, 1899	do	Do.
Thomas Smith, Moscow.....	Mar. 24, 1899	Education in Russia.....	Bureau of Education.

FOREIGN REPORTS AND PUBLICATIONS.

The Opening up of the Soudan.—The Board of Trade Journal, London, April, 1899, gives the following summary of a report by Lord Cromer to the Foreign Office, on the opening up of the Soudan to civilization and trade:

Almost immediately after the battle of Omdurman, a sum of £300,000 (\$1,459,950) was granted in order to enable the railway to be continued from the Atbara to opposite Khartoum. The distance is 187 miles. On February 13, about 20 miles of bank had been made and some 15 miles of rails laid. Progress has been delayed by the necessity of making a somewhat extensive cutting and erecting a long stretch of stone bank at a spot about 40 miles south of the Atbara.

The substructure of the permanent bridge and the manufacture and placing in position of the cylinders is in the hands of an Italian contractor. It is anticipated that this work will be completed before the superstructure can reach the Atbara.

In giving the order for this bridge, the time of delivery was even a more important consideration than price. An English firm offered to deliver the work in six and one-half months at a cost of £10,490 (\$51,050). The price tendered by an American firm was £6,500 (\$31,632) for delivery in forty-two days. The American offer was therefore accepted. These facts may admit of some explanation, but would appear, however, to merit the attention of bridge builders in Great Britain. The officer who managed this business writes: "In my opinion, the American firms gain time in keeping to fixed standards, either in locomotives or in bridges; consequently, having all their patterns, drawings, etc., always at hand, they are able to begin work at once. In England, everyone seems to have special designs, which take time in working out, and in most cases they have to send out for rolling, etc., whereas these large American firms are independent of everyone, and the rolling mills, as well as other machinery, are in their own hands."

It can not be doubted that railways constitute perhaps the greatest want of the Soudan. Nevertheless, in this as in other matters it is desirable to proceed with deliberation.

The first question to decide is what direction the railway should take, and which, amongst various projects which may be supported by more or less valid arguments, calls most urgently for prompt exertion.

There is water communication, which is free at all seasons of the year, between Khartoum and Fashoda. A railway connecting these two points would necessarily compete with river transport. The construction of this line is not, therefore, a matter of urgency.

It is not only probable, but almost certain, that sooner or later railway communication will be established between the Nile Valley and the coast of the Red Sea. At first sight, the most obvious course to pursue would seem to be to connect Suakin and Berber. The construction of this line has, in fact, often been suggested. So long as the dervishes remained in possession of Berber, it was clear that any discussion on this subject was premature. This obstacle is now removed. The question may therefore be considered on its own merits.

The line from Suakin to Berber has never yet been properly surveyed; neither has any trustworthy estimate been made of its cost. It is certain that throughout

its course it will pass through nothing but a long tract of almost waterless desert. The most competent authorities on this question are of opinion that connection with the Red Sea via Abu Haraz, Gedarif, and Kassala to some spot on the coast, although relatively circuitous, is to be preferred to the direct route from Suakin to Berber. The establishment of connection with the Red Sea, although obviously desirable, is not of such immediate importance as the execution of an alternative project.

There can, indeed, be no doubt of the direction in which railway extension is most urgently required. The territories about the upper waters of the Blue Nile were styled by Sir Samuel Baker, who visited this region many years ago, as "the granary of the Soudan." All recent accounts confirm this view. A short time ago, almost famine prices ruled at Omdurman, while at Gedarif grain was so plentiful as to be well-nigh unsalable. In February last, the price was £1 12s. 6d. (\$7.91) per ardeb (300 pounds) at Omdurman, and 4s. 6d. (\$1.10) per ardeb at Gedarif. At the latter place, the price is expected to fall to 2s. (48.66 cents) when the new crop, which is almost ripe, is harvested.

It may be added that Kassala is now being supplied with grain from Gedarif, the current price being 9s. 10d. (\$2.40) per ardeb. When the Kassala crop is gathered, it is expected that the price there will fall to 4s. 6d. per ardeb.

It would appear to be desirable, as soon as the railway reaches Khartoum, to make arrangements for its extension to Abu Haraz, with a view ultimately to reaching Gedarif. The distance is 122 miles, or, following the windings of the river, about 143 miles. The line has not yet been surveyed, but it is believed that no great engineering difficulties will have to be encountered.

It is hoped that the railway to Khartoum will be finished by the end of 1899, and that it will be possible to arrange for the extension to Abu Haraz in 1900.

With regard to commercial enterprise in these parts, for the time being the Soudan is closed; even that portion of the country which is already conquered is only just beginning to settle down into tranquillity, and it is to be feared that for some time to come trade will be a good deal hampered by difficulties of transport, even where railway communication has already been established. A defective system of railway management, the unfortunate break of gauge at Luxor, the ever-increasing demand for transport due to the growing trade of Egypt, and the special demands arising from the necessity of transporting a large quantity of material both to the Soudan for the construction of the line to Khartoum and to Assouan, where the reservoir is being built—all these causes have contributed to strain the resources of the railway administration to the utmost. Fresh rolling stock has been ordered, but for awhile considerable delays may occur in sending goods to the Soudan. As regards the export trade, abundance of transport exists. Most of the trucks running northwards are empty.

It is probable that the area of land under cultivation in the Soudan admits of considerable extension. At present, only a mere fringe on either bank of the river is cultivated, the water being supplied by water wheels (sakias). Even this fringe has considerably decreased in extent under the withering influence of dervish rule. There used formerly to be 3,000 sakias between the Atbara and Khartoum. It is stated that there are now not more than 70, if there are so many.

A considerable capital outlay on canals would be necessary in order to increase the cultivable area to any great extent. Before anything of this sort is, however, undertaken, the matter will require very careful examination. In the first place, the opinions of competent hydraulic engineers must be obtained as to the effect which would be produced on the water supply of Egypt by the execution of any extensive irrigation schemes in the Soudan.

The want of population is also a very serious difficulty. The population of the

Soudan was probably at no time very dense. It is now extremely sparse. The country between the Atbara and Khartoum, which is inhabited by the Jaalin tribe, has been almost depopulated. Metemmeh was formerly one of the trade centers of the Soudan. The ruins of the town are sufficient to show that it must have been inhabited by a numerous population. It is said that it now contains 160 men and over 1,000 women. Almost the whole adult male population was massacred by the dervishes.

The Soudanese are described as a far less industrious people than the Egyptians; and though the difficulties arising from these and other causes will probably be eventually overcome, yet, in considering the future of the Soudan, it is as well to bear them in mind.

The Soudan telegraph system south of Khartoum will be extended up the east bank of the Blue Nile to Abu Haraz. Thence, a branch line will be carried to Gedarif, which will be connected with Kassala.

A second line will run from Abu Haraz to Sennaar, the Blue Nile being crossed by means of a cable. From Sennaar, the line will run to Abba Island, on the White Nile, and thence up the river to Fashoda and the Sobat.

These extensions will require about 1,000 miles of wire. The greater portion of the wire has been already sent to the Soudan. Work is proceeding on the Kassala-Gedarif section.

An arrangement has been made as to the rates to be charged on through telegrams passing over the Soudanese and Egyptian lines, in the event of telegraphic communication being established with South Africa.

Development of French Guinea.—The following is from the *Revue du Commerce Extérieur*, Paris, April 15, 1899:

The union of the telegraphic network of French Guinea with that of Senegal has just been effected by the completion of the line to Kankalefa, in Portuguese Guinea. Dispatches can now be sent from Saint Louis to Konakry and intermediate stations independent of the submarine cable which follows the coast.

Another line, destined to connect the Soudan with the Ivory Coast, is now under construction, the work being prosecuted with the greatest activity. With the completion of this line, the different French colonies of West Africa will have direct telegraphic communication over wires run exclusively in French territory.

In its edition of April 1, the *Revue* says:

The latest statistics show that in the month of January, 1899, 6,759 caravan loads were examined at the bridge of Tumbo, which connects the island on which Konakry is built with the mainland, an increase of 4,455 loads over the corresponding month in 1898.

The packet boats from Antwerp, which formerly touched at Sierra Leone, have abandoned the latter port and now put into Konakry. French Guinea has built in three years a telegraphic network of 900 kilometers (559 miles). The general prosperity has caused great activity in building of every kind, and Konakry is steadily developing.

Commercial Schools in Switzerland.—A British Foreign Office report (No. 496, miscellaneous series) says:

There are at the present time fourteen commercial schools in Switzerland. The total number of pupils attending in 1895-96 was 728. Seven schools receive subsidies

from the Confederation, amounting in some cases to half the sum received from other sources. The charge for instruction varies in the different towns from \$5.79 to \$19.30 annually. There are from three to five annual courses. The subjects taught are not identical in these schools, but foreign languages occupy an important place in all, as well as mathematics, shorthand, and typewriting.

Chinese Trade Mission to Europe.*—The Austro-Hungarian consul-general in Shanghai states that it is reported in Chinese mercantile circles that the Chinese Government intends this spring to send a trade mission to the principal commercial centers of Europe and the United States, in order to study the best means of developing Chinese trade. The idea is to try to establish Chinese firms in some of the most important foreign trade centers. The fact that so clever a race of traders as the Chinese should begin to think it worth while to send commercial missions to the nations of the West is a fresh proof of the benefit which accrues to the trade of nations from such missions.

Trade in Bolivia.—Under the caption "A lost market" the Consular Journal and Greater Britain, London, March 18, 1899, discusses commercial conditions in Bolivia and the preponderance of German products in the markets of that country. Four years ago, says the article, the German exports to Bolivia were unimportant compared with the British; but Germany, by supplying cheap, showy articles, has now the largest share of the trade. In the search for new markets, the British have entirely let slip this South American country. The following extracts are taken from an interview with the Bolivian consul in London:

Bolivia is very rich in gold, silver, lead, and copper. A private company, largely composed of Scotchmen, with a capital of £30,000, is being completed to develop the alluvial gold deposits of the Pilaya River. There is an excellent opening for immigrants. In the plain of Beni are over 2,000,000 head of cattle, worth from 18s. to 20s. each. India rubber is the chief product of the country. England takes nearly all of it and the United States a little. The inland railways are limited; the traffic is by mules and barges. The nine steamers used for river traffic were all made in England; two more are now going out. The climate, owing to the hills, is healthy and varied.

The population of Bolivia is 2,000,000—one-third whites. The Government is stable and enlightened; laws and tariffs are liberal. Cotton goods pay 30 per cent customs duty ad valorem, on importation; silks and ready-made clothing, 35 per cent; drugs, 30 per cent; hollow ware, 25 per cent. Machinery is admitted free. Goods reach the country through Brazil or via Antofagasta, Chile.

The same issue of the Board of Trade Journal quotes from a Foreign Office report the statement that a new port was opened at the

* From the Board of Trade Journal, London, April, 1899.

beginning of this year by the Bolivian Republic on one of the principal tributaries of the Amazon River. The port is named Puerto Alonzo, is situated on the River Acre, or Aquiry, one of the head waters of the River Purus, and will have some importance as the outlet of a district rich in rubber. Formerly, the only port where Bolivian produce could be shipped was Villa Bella, on the Madeira; but this river offers many obstructions to navigation. On the other hand, the rivers Purus and Acre are easily navigated at high water.

Rubber Cultivation in Mexico.—The Board of Trade Journal, London, March, 1899, says:

The Mexican Tropical Planters' Company has issued a pamphlet, in which the statement is made that experiments have conclusively demonstrated that the cultivation of the rubber tree peculiar to Mexico and Central America (*Castilloa elastica*) is perfectly feasible; also, that after the seventh or eighth year a sufficient quantity may be annually extracted to make the investment an extremely profitable one. About 200 trees can be properly accommodated on an acre of ground, each tree yielding from 1 to 2 pounds of rubber annually, with a value of 61 cents to 71 cents per pound. The cost of gathering and preparing is slight, and, after adding freight to the market, 51 cents per pound net may be safely calculated on; giving, therefore, net returns to the planter of £20 to £40 (\$97.33 to \$194.66) per acre. The tree will continue to grow larger, with an increased yield each year, and a plantation fifteen years old should yield an average of 5 pounds per tree. No doubt, the long time required before returns can be expected will deter some from planting rubber; but, while it requires patient waiting, it is likewise the safest of all crops.

Value of the Russian Ruble for Customs Purposes.—The Board of Trade Journal, London, in its edition of April, 1899, quotes from a Foreign Office report a decision of the Russian Council, of March 3, 1899, according to which the rates of customs duties are to be reckoned one and one-half fold, as against those previously existing. All duties heretofore paid in rubles of the old standard (valued at 77.2 cents) are now to be paid in rubles of the new currency issue, valued at 51.5 cents.*

In order to simplify matters without changing the rates of duty under the customs tariff, these rates will now be levied in the new ruble unit with an addition of 50 per cent to the rates hitherto expressed. Thus, a rate of 10 rubles for a certain article under the tariff will now be reckoned at 15 rubles, and payment of the duty will be received in the current new gold coins of 15, 10, and 5 rubles,

* For an account of the change of currency in Russia, see Review of the World's Commerce, 1896-97, p. 254.

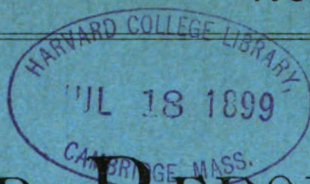
the value of which is expressed on their face in the depreciated standard ruble of $66\frac{2}{3}$ copecks.

In this manner, no alteration is really made in the customs tariff and in other payments due the Government under it, and the new law removes the hitherto existing anomaly of the nonacceptance by the customs in payment of dues of Russian coins, bank notes, Government securities the value of which was expressed in depreciated rubles. The ad valorem rates will continue to be levied in rubles of one-fifteenth of an imperial (*i. e.*, 51.5 cents), without any increase in the initial rates.

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Vol. LX.

No. 226.



CONSULAR REPORTS.

JULY, 1899.

COMMERCE, MANUFACTURES, ETC.

[FOR TABLE OF CONTENTS, SEE FIRST PAGE.]



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1899.

PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries.

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries.

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour.

Vol. 11 (1894).—American Lumber in Foreign Markets.

Vol. 12 (1895).—Highways of Commerce.

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

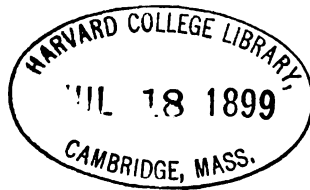
Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Highways of Commerce, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., and Tariffs of Foreign Countries are exhausted, and no copies can be supplied by the Department.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.



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131, page 663.

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to \$20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to April 1, 1899, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account

that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891-95 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U. S. gold.	Coins.
Argentine Republic*.	Gold and silver..	Peso.....	\$0.96,5	Gold—Argentine (\$4.82,4) and ½ Argentine; silver—peso and divisions.
Austria-Hungary†....	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British North America (except Newfoundland).	do	Dollar.....	1.00	
British Honduras.....	do	do	1.00	
Chile.....	do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver..	do	.92,6	Gold—doubloon (\$5.01,7); silver—peso (60 cents).
Denmark.....	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	do	Pound sterling..	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	do	Gourde.....	.96,5	Silver—gourde.
Italy.....	do	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan ‡.....	Gold	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia.....	do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin.....	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Portugal.....	do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia ¶.....	do	Ruble.....	.51,5	Gold—imperial (\$7.718) and ½ imperial (\$3.80); silver—¼, ½, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Gold	Peso.....	1.03,4	Gold—peso: silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed.

† The gold standard was adopted October 1, 1892. (See CONSULAR REPORTS No. 147, p. 623.) Values are still, however, frequently expressed in the florin or guilder, which is worth 2 crowns or 40.6 cents.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ See note to table of fluctuating currencies.

¶ For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

B.—Countries with fluctuating currencies, 1874-1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*.	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.30,8
Bolivia.....	do.....	Dollar until 1890; boliviano thereafter.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6		
China.....	Silver.....	Haikwan tael.	1.61	1.61				
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†.....	Gold.....	Pound (100 piasters).			4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7			
	Silver.....						.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2		
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver.....	Florin.....	\$0.30,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; boliviano thereafter.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....				.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....			.99,7	.99,7	.99,7	.99,7
	Silver.....		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1896.				1897.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2
Central America.	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,5	.44,3	.41,2
China.....	Amoy tael.....				.79,3	.76,7	.75,7	.71,7	.66,4
	Canton tael.....				.79	.76,5	.75,5	.71,5	.66,4
	Chefoo tael.....	.75,9	.76,3	.76,9	.75,8	.73,3	.72,4	.68,6	.63,7
	Chinkiang tael.....				.77,4	.74,9	.73,9	.70	.65,1
	Fuchau tael.....				.73,3	.70,9	.70	.66,3	.61,6
	Haikwan tael....	.80,8	.81,2	.81,9	.80,6	.78	.77	.73,1	.67,8
	Hankau tael.....				.74,2	.71,7	.70,8	.67,1	.62,3
	Ningpo tael.....				.76,2	.73,7	.72,8	.68,9	.64
	Niuchwang tael.				.74,3	.71,9	.71	.67,2	.62,5
	Shanghai tael....	.72,5	.72,9	.73,5	.72,4	.70	.69,1	.65,5	.60,8
Colombia.....	Swatow tael.....				.73,2	.70,8	.69,9	.66,2	.61,5
	Tientsin tael.....	.76,9	.77,3	.78	.76,8	.74,3	.73,4	.69,5	.64,6
Ecuador.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
India.....	do.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Japan.....	Silver rupee.....	.23,3	.23,4	.23,6	.23,3	.22,5	.22,2	.21,1	.19,6
Mexico.....	Silver yen.....	.52,9	.53,2	.53,2	.52,8	.51,1	.50,5		
Persia.....	Silver dollar.....	.53,3	.53,6	.54	.53,2	.51,5	.50,8	.48,2	.44,6
Peru.....	Silver kran.....	.09	.09,1	.09,2	.09	.08,7	.08,6	.08,2	.07,6
Russia.....	Silver sol.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Tripoli.....	Silver ruble.....	.39,3	.39,5	.39,8	.39,2	.37,9	.37,4		
	Silver mahbub.....	.44,3	.44,5	.44,9	.44,2				

Countries.	Monetary unit.	1898.				1899.	
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.
Bolivia.....	Silver boliviano.....	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6	\$0.43,9	\$0.43,4
Central America.....	Silver peso.....	.41,4	.40,9	.41,8	.43,6	.43,9	.43,4
China.....	Amoy tael.....	.68,5	.66,2	.67,6	.70,6	.71	.70,2
	Canton tael.....	.68,3	.66	.67,4	.70,4	.70,8	.70
	Chefoo tael.....	.65,5	.63,3	.64,6	.67,5	.67,9	.67,2
	Chinkiang tael....	.66,9	.64,6	.66	.69	.69,3	.68,6
	Fuchau tael.....	.63,4	.61,2	.62,5	.65,3	.65,6	.65
	Haikwan tael....	.69,7	.67,3	.68,8	.71,8	.72,2	.71,4
	Hankau tael.....	.64,1	.61,9	.63,2	.66	.66,4	.65,7
	Ningpo tael.....	.64,3	.63	.65	.67,9	.68,2	.67,5
	Niuchwang tael.	.65,9	.62	.63,4	.66,2	.66,5	.65,9
	Shanghai tael....	.62,6	.60,4	.61,7	.64,5	.64,8	.64,1
Colombia.....	Swatow tael.....	.63,3	.61,1	.62,4	.65,2	.65,5	.64,9
	Takao tael.....	.66	.66,6	.68	.71	.71,4	.70,7
Ecuador.....	Tientsin tael.....	.66,4	.64,1	.65,5	.68,4	.68,8	.68
India.....	Silver peso.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4
India *.....	do.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4
Mexico.....	Silver rupee.....	.20,1	.19,1	.19,9	.20,7	.20,8	.20,6
Persia.....	Silver dollar.....	.46	.44,4	.45,4	.47,4	.47,7	.47,2
Peru.....	Silver kran.....	.07,8	.07,5	.07,7	.08	.08,1	.08
	Silver sol.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4

* The commercial value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal.....	4.422 gallons.
Ardeb.....	Egypt.....	7.6097 bushels.
Are.....	Metric.....	0.02471 acre.
Arobe.....	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3175 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba.....	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid)	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine	Russia.....	28 inches.
Arshine (square).....	do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7,096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Caffiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333½ (1½) pounds.
Do*.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	117.5 pounds.
Do.....	Darmstadt.....	110.24 pounds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zollverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin." Among merchants in the treaty ports it equals 1.33½ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Siam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square)....	8.077 square feet.
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2.6997 acres.
Do.....	Spain.....	1 599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures.....	(See CONSULAR REPORTS NO. 144.)	
Fanega (dry).....	Central America.....	1.5745 bushels.
Do.....	Chile.....	2.575 bushels.
Do.....	Cuba.....	1.599 bushels.
Do.....	Mexico.....	1.54728 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs ; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7.776 bushels.
Do.....	Uruguay (single).....	3.888 bushels.
Do.....	Venezuela.....	1.599 bushels.
Fanega (liquid).....	Spain.....	16 gallons.
Feddan.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2.5006 quarts.
Do.....	Mexico.....	2 5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons
Garnice.....	Russian Poland.....	0.88 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2.471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1.422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2.2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4.9629 bushels.
Korree.....	Russia.....	3.5 bushels.
Last.....	Belgium and Holland.....	85.134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	113½ bushels.
Do.....	Spain (salt).....	4.760 pounds.
League (land).....	Paraguay.....	4,633 acres.
Li.....	China.....	2.115 feet.
Libra (pound).....	Castilian.....	7.100 grains (troy).
Do.....	Argentine Republic.....	1.0127 pounds.
Do.....	Central America.....	1.043 pounds.
Do.....	Chile.....	1.014 pounds.
Do.....	Cuba.....	1.0161 pounds.
Do.....	Mexico.....	1.01465 pounds.
Do.....	Peru.....	1.0143 pounds.
Do.....	Portugal.....	1.011 pounds.
Do.....	Uruguay.....	1.0143 pounds.
Do.....	Venezuela.....	1.0161 pounds.
Liter.....	Metric.....	1.0567 quarts.
Livre (pound).....	Greece.....	1.1 pounds.
Do.....	Guiana.....	1.0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; 1 inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.727 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1403 miles.
Morgen.....	Prussia.....	0.63 acre.
Oke.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	2¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.102 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5¾ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Seer.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1.6 quarts.
Standard (St. Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suerte.....	Uruguay.....	2,700 cuadrás (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	590.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curaçao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Vergees.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
 Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
 Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
 Gram equals 15.432 grains.
 Decagram (10 grams) equals 0.3527 ounce.
 Hectogram (100 grams) equals 3.5274 ounces.
 Kilogram (1,000 grams) equals 2.2046 pounds.
 Myriagram (10,000 grams) equals 22.046 pounds.
 Quintal (100,000 grams) equals 220.46 pounds.
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
 Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
 Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
 Liter equals 0.908 quart.
 Decaliter (10 liters) equals 9.08 quarts.
 Hectoliter (100 liters) equals 2.838 bushels.
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
 Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
 Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
 Liter equals 1.0567 quarts.
 Decaliter (10 liters) equals 2.6418 gallons.
 Hectoliter (100 liters) equals 26.417 gallons.
 Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
 Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
 Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
 Meter equals 39.37 inches.
 Decameter (10 meters) equals 393.7 inches.
 Hectometer (100 meters) equals 328 feet 1 inch.
 Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
 Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
 Are (100 square meters) equals 119.6 square yards.
 Hectare (10,000 square meters) equals 2.471 acres.

CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

Vol. LX.

JULY, 1899.

No. 226.

TRADE CONDITIONS IN AUSTRALASIA.*

The marked improvement which has obtained in the importation of goods of American manufacture into the Australasian colonies has been due primarily to the fact that our manufacturers have taken the trouble to consult and consider the requirements of the Australian importers, and have maintained a uniform standard of quality and finish in their goods, and have made few alterations in prices. In instances where quality has been deliberately varied and prices have been advanced, on the supposition that the market has been "corralled," the results have been disastrous to the exporters, and have had a reflex action on manufacturers in similar lines of business.

That these colonies present a vast opening for the introduction of our goods is evidenced by the fact that more than half of the agricultural implements imported are of American manufacture and origin, and those which are manufactured in these colonies are copies or travesties of the originals from the States. I propose to briefly review some of the goods which are imported into Australasia.

Canned meats.—In spite of the local canning, there is a large demand for American meat, which should be encouraged and stimulated by judicious advertising and efforts.

Baking powder.—Made in this country and of good quality.

Oils and kindred lines.—The United States has practically controlled this market for many years, and apparently will continue to do so.

Fish.—The canned article from the Pacific slope has absolute command of the salmon trade. The British exports are competing

* Copy of a report made in answer to inquiries by the director of the Philadelphia Museums, to whom the original has been sent.

strongly in other lines. There is a very good opening here for tinned and other lines of fish, as the exigencies of the climate in the tropical lands cause an extensive consumption of these goods.

Hardware.—It is a fact that most of the household articles used in this country are imported from the United States, simply on account of their cheapness and adaptability. In heavy lines, Sheffield and Wolverhampton, and once in awhile Germany, continue to hold their own in edge tools and engineers' and blacksmiths' hammers. Carpenters' tools are entirely from the United States.

Farm and garden implements.—These are of American origin, and as long as they are neatly produced and the price is kept within reasonable limits, the United States will continue to fill Australian wants in this direction.

Axes.—These are all of American production, and are likely to remain so, if the quality is kept up to the present standard; but the action of some of our manufacturers in making a cheap ax at a very low price will, if not checked, have a deleterious influence on the trade and provoke competition. The Swedish makers are already doing their best to compete with the American ax, and, as soon as they get a little more experience, will become formidable rivals. The fact remains, however, that so far they have to get their handles from the United States.

Saws.—Persistent advertising, combined with cheapness and good quality, have succeeded in making the product of an American firm easily the favorite. The firm referred to is being very closely run by other American competitors, who are getting a proportion of the trade. America will control the market for handsaws. Circular saws, however, are still recognized as having their origin in Sheffield, and the Sheffield trade-mark is usually a guaranty of good quality. A Philadelphia firm is making strenuous efforts to gain the trade. The Sheffield people have been losing ground lately, owing to competition and reduction of quality to meet prices; but good makers are maintaining price, quality, and reputation.

Builders' ironmongery.—The manufacturers of the United States get a considerable proportion of the trade, and, with the exception of brass foundry works, will maintain this position. The brass foundry is imported almost entirely from Birmingham, and this trade will probably never be disturbed.

Locks.—In first-class heavy locks, Great Britain maintains its position, but in padlocks the United States has the trade. Rim locks and mortise locks are imported from the United States, but not in the same proportion as from Great Britain.

Bird cages.—These are almost entirely of United States manufacture.

Pumps and windmills.—Pumps are almost all of American manufacture, except steam pumps, in which British manufactures still hold first position. Windmills are all American.

Stoves.—America had at one time all the trade in portable cooking stoves; but Scotland has made a desperate attempt to recover prestige in this class of castings, and is more than partially successful.

Wooden ware.—The United States controls this market; and so long as our manufacturers maintain their standard of excellence, they need fear no competition.

Furniture.—For high-class American furniture, there is comparatively little demand; but for cheaper lines, such as desks, chairs, and bureaus, there is an increasing outlet. When once our manufacturers realize the difference between the climates and the necessity of adapting their goods to the requirements of the warmer Australian countries, they will have the market. Meanwhile, China and Japan have an important trade with Australia.

Carriages and buggies.—The demand is not increasing, simply by reason of the excellence of the local production, though all the parts necessary to the equipment of a first-class carriage or buggy are imported from the United States.

Engineers' tools.—This trade is being steadily developed, and the United States is eclipsing the European manufactures.

Boots and shoes.—The excellency of the American manufacture is universally admitted, and those makers who are turning out lasts to meet Australian requirements are deriving profit. But this industry is essentially a colonial one, and, in time, Australasia will produce all she requires in this line.

Lamps.—The United States has all the cheap trade now, and for better class goods the demand is increasing every day. A little attention to the style of British productions would enable our manufacturers to supply the whole of Australasia.

Pressed-glass ware.—The United States controls this line for nearly all Australasia, but it will be long before we can compete with the better class of European goods, which are cheap and of good quality. Our manufacturers ought to make an effort to gain this business, especially in the cut-glass trade.

Cotton goods.—Denims and heavy cloths are finding a market here, and Canada is a strong competitor with Great Britain. There is an excellent opening here for American cotton cloths, but our manufacturers must find exactly what is wanted, and meet the market.

Underwear.—Cotton underwear finds no demand here, for climatic reasons; but woollen or union goods would sell readily if adapted to the Australian requirements, which are essentially different from the American. Combination suits, for instance, should be "fashioned," and have no legs.

Pig iron.—The quality of American pig iron has left little to be desired, and that Australia will in the future be a great market for the American production can not be doubted. But Great Britain has the supremacy, owing to the fact that her iron is imported to Australia with a freight rate of about 60 cents a ton of 2,240 pounds, while the American has always to pay full rates. The British get a nominal freight, because the iron is used for ballast, usually for timber ships.

Bar iron.—America has this business in her hands, if she will maintain her quality and keep down the price. The quality of one or two recent shipments which have reached these markets has been so irregular that merchants are “shy” of American iron until tested. Only refined iron is desired, and the price must be kept below that of the British until a reputation is established. There seems to be a tendency to advance prices recently to British limits, which can not be done yet, as the United States product is not so well known.

Steel.—American steel is cheaper and frequently better than the British, owing to the better quality of the ore used for conversion purposes. For crucible cast steel, Sheffield will keep to the front for years to come; but for open hearth and Bessemer steel, America can have all the trade if she gives it the proper attention.

Freights.—The recent irregularity in freights has given rise to a great deal of trouble, and some uncertainty. They must be maintained uniformly, and the advent of steamers into this trade will be of great benefit to American exportation. While freights ought to be remunerative to shippers, it is sincerely to be hoped that competition will restrain them from the extravagant rates persisted in by the recent shipping ring.

Banks.—Australian people can not understand why no American bank has yet opened a branch here. The enormous amount of exchange with the United States should have induced some of our capitalists to exploit this territory.

American prospects have never been brighter here than they are now, and a little less independence on the part of some of our manufacturers—notably in the nail industries—and a little more regard for local requirements, will lead to a widely increased volume of trade. It must, however, be remembered that in all the seven colonies forming the Australasian group there are only 5,000,000 people, and, consequently, too much in the way of results must not be expected by our manufacturers, who are beginning to consider the possibilities of Australasia as a field for exportation.

JOHN P. BRAY,
Consul-General.

MELBOURNE, *March 16, 1899.*

ECONOMIC CONDITIONS IN NORFOLK ISLAND.

It will be remembered that a change in the form of government was inaugurated here in November, 1896, by an executive sent from Sydney. This change did not produce the beneficial effect expected; on the contrary, the islanders, always used to governing themselves, chafed at the innovation.

The once stable industry of the island—whaling—appears to be declining of late years, the season just passed closing with a take of only twenty tuns—a very poor return indeed for the nine boats engaged in the occupation. An important factor is no doubt the low price of the commodity.

Agricultural conditions are not much better. Bananas grow prolifically, and fine bunches can be bought for 12 cents; still, they are a drug, the New South Wales fruit import laws virtually prohibiting this fruit from going to Sydney. The islanders are now giving attention to the cultivation of coffee. The plant grows and thrives well in the valleys here, bearing profusely and being absolutely free of disease. Almost every family has a few trees. The bean, experts say, is of the best quality. The coffee plant was originally introduced here by the first settlers, over one hundred years ago, from the Brazils, it is understood. The governor, a year or two ago, issued an ordinance prohibiting the importation into the island of plants or live beans. In an island with a total area of only 8,500 acres, there are, of course, no large spaces available for extensive cultivation; but in all the numerous valleys branching away from Mount Pitt, the tree would grow to perfection. One planter has within the last two years set out 13,000 young plants, which are reported to be growing well, and another at the foot of the range has already a number of trees in full bearing.

The trade of the island is of small volume and is in the hands of two or three storekeepers, whose dealings are confined principally to barter, there being little money in circulation. The imports and exports for the past year from the customs returns are: Imports—from New South Wales, \$9,895; New Zealand, \$6,007; New Caledonia, \$160; South Sea Islands, \$49; total, \$16,111; exports—to New South Wales, \$1,225; New Zealand, \$3,120; South Sea Islands, \$452; New Caledonia, \$1,215; total, \$6,012; grand total, \$22,123. The imports embrace principally clothing, clothing stuffs, eatables, and ironmongery, while the exports consist of garden produce, fruit, whale oil, hides, plants and seeds, and a little wool. The connection with the outside world is now much more satisfactory than formerly, the Governments of New South Wales and Victoria having

established a bimonthly steam service between Sydney and the New Hebrides, Banks, and Santa Cruz groups of islands, calling at Lord Howe and Norfolk islands both ways.

The population of the island on December 31 last for the two communities was: Norfolk Island, 668; Melanesian Mission, 178; total, 846.

In 1898 rain fell on one hundred and ninety-two days, gauging 68.94 inches; February most, with 11.76 inches; September least, 2 inches. The thermometer ranged from 56° to 79°—highest in February, 79°; lowest in August, 56°.

NORFOLK ISLAND, *March 6, 1899.*

ISAAC ROBINSON,
Consular Agent.

ANGLO-RUSSIAN OIL SYNDICATE IN JAVA.

I inclose translation of an article quoted in a local journal from the Frankfurter Zeitung. In a previous report * I recited the terms of a tentative contract between the Standard Oil Company and the Dutch Moeara Enim Company, of Sumatra, by which an amalgamation of those two companies was arranged with a view to controlling the eastern markets. This contract, however, was rendered null and void by the Dutch Minister of Colonies, who forbade it being put into effect on the ground that foreign enterprises were not wanted in the Dutch colonies.

Now, however, the Moeara Enim Company has concluded a practically similar deal with a large Anglo-Russian oil syndicate. The general opinion is that a division of territory is contemplated, and that there will be no cutting of oil prices.

There is no doubt that in the constantly widening markets of Asia, there will be room for several companies to make substantial profits, supposing, of course, that too many new oil wells are not discovered here in the meantime.

The importance of the inclosed article lies in the fact that it was printed in the Frankfurter Zeitung, which is one of the best informed papers in the world on financial matters.

I give below statistics of petroleum imports for Java for the last three years:

Year.	American.	Russian.	Sumatran.	Total.
	<i>Cases.†</i>	<i>Cases.†</i>	<i>Cases.†</i>	<i>Cases.†</i>
1896.....	1,678,682	731,951	330,652	2,741,285
1897.....	2,009,290	495,106	539,569	3,043,965
1898.....	1,326,433	365,284	625,559	2,317,276

* See "American petroleum in Java," CONSULAR REPORTS No. 214 (July, 1898), p. 380.

† Of 10 gallons each.

It will be seen, then, that the importation of American and Russian oils has fallen off, while that of Sumatra oil has increased. The total is also less.

The sales of local Java petroleum for 1898 were 1,476,412½ cases. This was the best year known for this trade, and evidently one of the causes of the decrease in importation of foreign oils.

The increased excise tax of \$1 per hectoliter (26.417 gallons) mentioned in my report of January 7* bears on all oils alike. In addition, American and Russian oils pay a customs duty of 10 cents per hectoliter (26.417 gallons).

SYDNEY B. EVERETT,
Consul.

BATAVIA, *March 9, 1899.*

THE PETROLEUM TRADE IN EAST ASIA.

[Translation of article clipped from the *Bataviaasch Nieuwsblad* of March 7, 1899.]

A correspondent writes from Rotterdam to the *Frankfurter Zeitung*:

The arrangement made a few weeks ago between the Moeara Enim Petroleum Company, of Amsterdam, and the Shell Transport and Trading Company, of London, has awakened widespread interest, on account of the great influence which this combination can have on the limitation of the domination of the Standard Oil Company in the eastern Asiatic markets. Until now, the petroleum trade east of the Suez Canal, with the exception of one or two small concerns which supplied Java, Assam, etc., has been exclusively in the hands of two groups—one the Standard Oil Company and the other the firm of Samuel & Co., of London, whose petroleum interests have now passed to the above-mentioned Shell Transport and Trading Company.

Last year, it was supposed that the Royal (Dutch) Petroleum Company was destined to make a third of the petroleum magnates of the East; but these expectations were not fulfilled, since the old oil wells in Langkat and Deli are continually giving less oil, and the borings which have been made on other territories have, until now, shown very poor results.

According to report, the Sumatra-Palembang Petroleum Company, a dependent company of the Royal, has lately bored some yielding oil wells; but the resulting production will hardly cut much figure in the East.

The Moeara Enim Company can now sell its product in the most advantageous manner possible, by means of the widespread organization of the Shell Company in eastern Asia. The Shell Company, in which (with the exception of the London and Japan firm of Samuel & Co.) the largest Anglo-Chinese and British Indian firms have a share (Grahams & Co., Ker Bolton & Co., Boustead & Co., Best & Co., Arnhold Karbay & Co., A. Bunge & Co., controlling £1,800,000 of capital), possesses a large fleet of tank steamers, petroleum storehouses in all the principal harbors of China and Japan, its own factories for the making of cases, tins, kettles, etc.—in short, it has in the last ten years effected such an organization that, in spite of the high freight rates from Batum and the great cost of going through the Suez Canal, it has contrived to place the Russian oil in eastern Asia on an even footing in the competition with the American oil.

*This appears clearly from the figures of imports of petroleum, in the above-mentioned lands, which amounted in 1896 and 1897 to 26,800,000 and 28,600,000

* See CONSULAR REPORTS No. 224 (May, 1899), p. 68.

cases, of which the Russian oil had a share of 12,500,000 and 12,600,000 cases, while the Standard Oil imported 14,300,000 and 16,000,000 cases. These figures indicate, at the same time, the growing needs of those countries, which, on account of the opening of China, will be increased in a still greater degree. That under such circumstances the strengthening of the Russian combination with the Moeara Enim Company is of exceptional importance is very evident, and explains why this latter company was able to close the contract on such advantageous terms for itself. The basis of this contract is that the Moeara Enim Company, after deducting minimum freight, a fair commission, and the cost of exploitation, shall receive a fixed price, as well for the illuminating oil as for the by-products. In addition to this price, which yields a good profit, the Moeara Enim Company has the right to deliver twice the quantity, and it will be in a position to do this as soon as the refineries now in process of construction are finished.

Of the profit above the standard price, the Moeara Enim receives 75 per cent; the Shell Company, 25 per cent. The Moeara Enim Company has the right to abrogate the contract on six months' notice; on the other hand, the Shell Company has the right to prolong the contract, which is for seven years, only on the condition that a high margin of profit, previously agreed upon, shall be assured to the Moeara Enim Company.

The conditions for the Moeara Enim Company are obviously advantageous, the more so as the by-products are treated on similar conditions. For instance, the use of "astatki," a petroleum residue which serves as a substitute for coal, has already become so extensive that the trade in that article now surpasses that in the illuminating oil itself. Therefore, the Shell Company has found it necessary to build in the principal cities of eastern Asia special tanks and apparatus for this product also. The company is in negotiation with the German Government for the installation of a similar plant in Kyao-chau. Many think that the time is near when this article will replace coal on steamships.

It is hard to predict just what the consequences of this union of the East Indian and Russian petroleum producers will be. The Samuel combination has at present no idea of making an aggressive campaign against the Standard Oil Company, and, similarly, the latter company would look very carefully before starting a war with such a powerful combination as an opponent.

The territory to be supplied is so great that a division of it by the two parties is not only possible, but also highly probable; while, on the other hand, the consumers are protected by the possibility of competition from being unduly imposed upon by either of the two combinations.

NATURAL VS. ARTIFICIAL INDIGO IN THE EAST.

I inclose herewith an article clipped from a Singapore paper, from which it will be seen that the production of natural indigo is seriously threatened by artificial indigo manufactured from coal-tar products.

This new industry seems to be established in Germany, but is reaching out in the East and attacking natural indigo on its own ground.

The article is interesting, and the facts are true enough; but, although the situation may be desperate as regards British India and

the Straits, the indigo industry has been holding its own very well in Java, as is shown by the figures below. It is safe to say that until the outlook becomes very much more unpromising and a better paying industry offers itself, indigo will continue to be raised on this island.

I have been unsuccessful in procuring figures of the profits or losses in planting; but those planters with whom I have talked, allowing for the natural discontent peculiar to those engaged in agricultural pursuits the world over, do not appear to be unduly dissatisfied, and last year's prices were no less than usual.

The total indigo produced in Java in 1896 (figures for 1897 and 1898 not yet out) was 723,822 kilograms (1,592,410 pounds), on 144 plantations.

Year.	Imports (from Straits Settlements only).		Exports (none to the United States).	
	Kilograms.	Pounds.	Kilograms.	Pounds.
1895.....	23,540	51,788	879,904	1,935,788
1896.....	36,121	79,466	824,550	1,814,010
1897.....	32,701	71,942	1,091,383	2,401,042

Three-fourths of the exports went to Holland. I am informed that the exports for 1898 show a decided increase over those of 1897.

SIDNEY B. EVERETT,

BATAVIA, *March 7, 1899.*

Consul.

[From the Straits Budget, Singapore, February 9, 1899.]

THE INDIGO INDUSTRY.—ARTIFICIAL VS. NATURAL PRODUCTS.

Some few days ago, we announced that coal tar had yet another conquest to record, in that it threatened to supplant the indigo trees of India and Java by supplying an indigo chemically identical with, and infinitely purer than, that hitherto on the market. Since the paragraph to that effect appeared, we have been enabled to collect further information on the subject, which, of course, is not without its interest for the indigo-importing firms of Singapore and those who have hitherto been in the habit of making use of the natural article. To put the matter in a nut shell, producers of natural indigo are in a bad way; in fact, there is at present taking place a revolution in the industry, owing to the introduction by the Badische Anilin and Soda Fabrik of an article which is claimed to be of one uniform and invariable quality. The competition of the artificial product—which has been but two years on the market—sits heavily upon all who are interested in the natural indigo, especially in India. Thence, of course, the greater part of the world's supply of indigo has in the past come. People are asking how long it will be ere the great German factory at Ludwigshafen will have driven the natural products—not of indigo only, but of other substances used for a like purpose—from the markets of the world. There are signs in India of a drawing in in all directions in the districts

in which indigo is grown. In Bengal, the indigo forecast for last year was for an area nearly 10 per cent less than the average; in the Northwestern Provinces and Oudh, it was $37\frac{1}{2}$ per cent below the average; in the Punjab, 33 per cent less than the small area of last year; in Madras, it was much less than half the average. The indigo growers are despondent, and hesitate to embark their capital in the production of a commodity which is threatened with being displaced by the synthetically prepared artificial dye.

The demand for this latter is meanwhile growing largely, not in Europe and America alone, but in the eastern markets. The claims that are put forward on its behalf are of the most formidable kind; and they will, perhaps, meet with the more serious attention, seeing that artificial indigo is not one of the surprises of modern chemistry suddenly sprung upon the industrial world. The same patient and laborious process of experimental synthesis which resulted in the production of alizarin, the coloring matter of madder, from coal tar, has been pursued for many years in the artificial production of indigotin, the coloring principle of pure indigo. It has taken many years to make the process a commercial success, but those who are engaged in it appear to be confident that they have at length reached the goal. In some of the indigo-growing districts of India, efforts have been made for some time past to increase the purity of the local natural product; but at the best, it stands at a disadvantage of nearly 9 per cent in purity in comparison with its German competitor, which claims to have nearly 99 per cent of pure indigo blue. To further emphasize the falling off in the Indian trade, it may be mentioned that, whereas the quantity of natural indigo exported during 1896-97 was 109,001 cwts., in 1897-98 it was 71,364 cwts. These figures show a decline of 34.5 per cent, and last year's figures are the lowest for some years past. The falling off is principally noticeable in the exports to the United Kingdom, which have decreased by 54.4 per cent. With the exception of the United States, the trade with which has continued much the same as in previous years, and Turkey in Asia, which shows a slight increase in its limited consumption, the exports from India have stagnated generally with European countries. The unfortunate condition to which this thriving industry is reduced is in great measure due to the introduction of the German article, but it has also to be remembered that there has been a good deal of overproduction in many of the indigo-growing districts, a tightness in the money market, and that there are still heavy stocks in the home markets. It is a hopeful sign, however, that Japan and Egypt are furnishing new and rapidly growing markets; the large stocks may yet be absorbed by the small dealers who got rid of their supplies owing to the Badische scare.

There is a good deal of dyeing going on at Singapore, and the new product has been used experimentally by several Chinamen, who have pronounced the results to be far and away better than any obtained with natural indigo. The German preparation, in fact, is found to be about twenty times stronger in dyeing qualities than Singapore indigo. That being so, and the price being commensurately moderate, we may anticipate that very little other than the German preparation will soon be in use here. It is evident that the planter of indigo has to meet science with science, but he has entered into the contest late in the day, and the prospect before him is not a bright one.

TRADE OF KOREA IN 1898.

Korean trade for 1898 shows a falling off in comparison with reports for the year 1897. The complete customs returns are not yet available, but I have secured the figures as to the total exports and imports and a list of the principal articles imported from America, from which the table appended to this report is made.

The total trade for 1897 was 23,511,350 yen (\$11,755,625 gold), while for the year 1898 it was 17,527,864 yen (\$8,763,932 gold). This is accounted for by the fact that the effects of the scarcity of rice mentioned in my report of April last* and due to the short crop of the summer of 1897 have not been dissipated by the generous crop of 1898, and the people seem inclined not to part with their food supply as readily as in former years of plenty. In spite of this general falling off in trade, importations from the United States have increased. The customs returns are not clear as to the proportion of American goods, they being often classed with English and European products. I have prepared a list of American imports, however, showing that goods which may be safely considered as American were imported in 1898 to the value of 1,270,075 yen (\$635,037.50 gold), of which the chief items were: Railroad material, \$297,861.50; kerosene, \$189,380.

In this connection, I wish to correct an error that has crept into the report of the United States consul at Chefoo on the trade of that port, published in CONSULAR REPORTS No. 221 (February, 1899). In giving a comparison of the trade of the port of Chefoo with the trade of certain other countries in American goods, it is stated that the total of American imports into Korea for the year 1897 amounted to but \$68,074. In my report on the trade of Korea for 1897, published in CONSULAR REPORTS No. 215 (August, 1899), p. 563, I showed that American imports into Korea for that year amounted in round numbers to \$400,000 gold.†

Manchester sheetings are being largely replaced by Japanese cotton yarns, which are woven by the women on their hand looms at home. As the labor of women is not considered of any value, a more durable cloth is obtained for less money than would be paid for the imported article. The import of shirtings and sheetings for 1898 is estimated to be 500,000 pieces, with 13 pieces to a picul. From a very reliable source, I have an estimate that within a few years

* See CONSULAR REPORTS No. 215 (August, 1898), p. 563.

† NOTE BY BUREAU OF FOREIGN COMMERCE.—The statement referred to was quoted from figures given by the United States Treasury Bureau of Statistics, and referred only to the direct exports from the United States to Korea.

Korean imports will show a percentage of 90 per cent Japanese yarns to 10 per cent sheetings and shirtings, instead of just the opposite, as has lately prevailed.

PRONENESS TO ACCUMULATE DEBTS.

The Koreans can not, apparently, resist the temptation to run into debt when the opportunity occurs. They seem not to consider the day of payment, but rather trust to some lucky chance for release from the obligation. This tendency, and the strange complacency of large Chinese firms as well as of some Japanese in allowing credit to irresponsible Koreans, has had quite a paralyzing effect on Chemulpo trade of late, as the Chinese have begun to sue for the amounts due them. This frightens a certain class of trade away from the port. Japanese and Chinese have acquired so much real estate through the foreclosure of mortgages that the Korean Government has begun to object to recording title deeds, lest the city of Seoul and other places slip entirely into the hands of these foreigners. Koreans possess the feeblest commercial instinct. Their shops are almost always little booths, where the owner sits surrounded by his wares; and if a purchaser chances to ask for a thing out of the merchant's reach while the latter is enjoying a quiet pipe or for some other reason does not wish to be disturbed, he will reply that the article is out of stock.

An American, some time ago, desiring to find an article for export, decided on certain artistic mats, and, having agreed upon a price, asked the dealer how soon he could furnish him with 5,000 of them. The man replied promptly that if he wanted as many as that, he would have to charge double the price.

In view of these conditions, Korean cities will probably fare as have Manila, Bangkok, and other places in the Far East, where the thrifty Chinese merchant has replaced the native trader.

GOVERNMENT CONCESSIONS.

Akin to the mercantile apathy of the people is the reluctance with which they allow other people to do what they seem unable to accomplish themselves. The idea seems to prevail among the Koreans that anything Korean is greatly desired by the outside world. This may be accounted for by the fact that for centuries they completely closed their doors to all comers, and when they were forced to open, it was the prelude to robbery and pillage. Now, when a foreigner asks for a right to develop some dormant Korean interest, suspicion is at once aroused, and the thing, which may have possessed no previous value in the estimation of the owner, at once seems to be a most desirable possession.

This is notably true of the coal mines. Koreans heat their

houses by means of flues, laid under a tight stone and cement floor, sealed with a strong layer of oiled paper. The fuel for these flues is wood, grass, and brush. This fuel has to be transported on the backs of men, bulls, or ponies for a long distance, and is therefore very expensive. Korea has large deposits of smokeless coal which foreigners have shown is well adapted for use in their heating system, which would be a great saving in expense, while the proper development of these mines would furnish a much-needed coal supply for other purposes. So far, all attempts to obtain a coal-mining concession have failed, and these deposits lie practically neglected, except that a little rotten surface coal is got out each year and sold to foreigners at \$9 gold per ton. As this stuff is mostly dust by the time it reaches its destination, it is mixed with red clay and made up into balls by hand, which burn excellently, but are unnecessarily costly in a country where good coal should be readily available at a low price.

A Russian company has just received a license to catch whales off the coast of Korea and bring them to one of three ports on the east coast of the peninsula, for the purpose of cutting them up for shipment. These ports have been so used by this company for some time, but as this use was held to be a violation of treaty, the Korean customs seized a Russian whaling vessel and detained her for a couple of weeks, for which detention an indemnity of 35,000 yen (\$17,500) was demanded and the license above mentioned asked. It seems to have been held that as the Japanese have been in the habit of fishing along the Korean coast, the same right should be granted to others. The Japanese, however, have this right by virtue of certain regulations agreed upon between the two Governments in November, 1889, by which Japanese fishermen pay for fishing licenses per annum:

	Yen.
For a vessel manned by 10 or more persons.....	10= \$4.98
For a vessel manned by 5 to 9 persons.....	5= 2.49
For a vessel manned by 4 or less persons.....	3= 1.49

Penalties are provided for violation of these regulations, and whales are not included in the license. This interest, as prosecuted by the Japanese, is officially announced to amount to 3,500,000 yen (\$1,750,000) per annum. The Koreans themselves are indifferent fishermen and neglect this promising industry, though, as fish are common and plenty in the market, the demand is probably supplied.

WHALE BEEF.

The Russians who take whales off the coast of Korea cut up the blubber and flesh, salt it, and send it to Japan for sale as food. The Japanese consume large quantities of this meat. The market seems

to be extensive and the prices good. This Russian company employs several vessels in catching the whales, which are shot from steamships and towed ashore, to be cut up and salted. As the whale-bone is inferior, I understand but little attention is paid to this, the large bones being sent to Japan for manure. This might offer a market for our own whales. I learn from Japanese sources that 2,030,912 pounds of whale flesh were imported into Nagasaki alone during 1898, valued at 112,940 yen (\$56,470 gold).

NEW PORTS.

In May, 1898, the Korean Government announced that four new ports were to be opened to foreign trade and residence.* These were: Kunsan, on the west coast, south of Chemulpo; Masampo, on the southern end of the peninsula, near Fusan; and an obscure place called Sungchin, on the east coast; while the northern capital, Peng Yang, was to be opened as a trade mart. After some delay, it has been officially announced that May 1, 1899, is the date for the formal opening of these ports, at which time regulations for a municipal council will take effect within certain defined limits, as in the case of the other open ports. The regulations to be adopted are those at present in force at the ports of Mokpo and Chenampo.†

RAILROADS.

I recently made a report in detail regarding the Seoul-Chemulpo Railway, a road 25 miles in length, standard American gauge, connecting Seoul, the capital of Korea, with Chemulpo, the chief port of the country.‡ This road was being built by Messrs Collbran and James, Americans, for the American concessionnaire, James R. Morse, at a cost of \$1,500,000 gold, including an extensive iron bridge over the Han River which was to cost \$190,000. The material was mostly on the ground, and the earthwork was about completed, together with the abutments of the bridge and an extensive sea wall and reclaimed foreshore; when, on December 31 last, the concession and properties were sold by Mr. Morse to a Japanese syndicate. The work is intended to be completed during the year. This is the first railroad to be built in Korea, and the materials and equipment are almost entirely from America. The Japanese have a concession to connect Seoul with the port of Fusan, several hundred miles distant at the extreme southern end of the peninsula. Engineers are now going over the proposed route.

A French syndicate holds a concession for a railroad to connect

* See CONSULAR REPORTS No. 216 (September, 1898), p. 31.

† See CONSULAR REPORTS No. 209 (February, 1898), p. 228.

‡ See CONSULAR REPORTS No. 215 (August, 1898), p. 563.

Seoul with the northwestern border, where at one time it was supposed such a line would connect with the Russian lines in Manchuria. There seems to be no present indication that this road will be built.

ELECTRIC ROAD.

H. Collbran, the American contractor for the Seoul-Chemulpo Railway, is just completing the construction of an overhead-trolley electric street railroad of some 6 miles in length, in Seoul, for a Korean company. The materials for this road are from America and Japan, the car bodies having been neatly constructed by the Japanese.

GOLD MINES.

During the past year, a concession was granted to an English syndicate for a mining district to be hereafter selected and to be worked for a period of twenty-five years upon terms somewhat similar to those of the American and German concessions—that is, upon a payment to the Korean Government of one-fourth of the net proceeds of such work.

The American gold mines in the northern province of Peng Yang are becoming promising, judging by the activity with which the work is prosecuted. This company employs nearly forty Americans at its mines, which include the whole district of Woon San, some 1,000 square miles. The work at present is in rock, though the placers are good and will receive attention later. The company at present works only twenty stamps, but forty stamps more, from the Union Iron Works, are being erected. Some one thousand two hundred Koreans are employed in and about the mines in various capacities, and as miners they are considered excellent. The prospects are so good that the company is contemplating the enlargement of its facilities in various ways.

DISEASES.

Intermittent fevers, smallpox, typhus, typhoid, and relapsing fevers have been unusually severe during the past winter owing probably to the very mild weather. There has not, however, been an epidemic of these diseases. Owing to the mild winter, cholera may be expected to be somewhat severe during the coming summer. Reports of diseases and deaths are not kept by the Korean Government, and statistics are not obtainable. The climate is the best in the whole East, as the records of our naval vessels stationed at Chemulpo will demonstrate.

HORACE N. ALLEN,
Consul-General.

SEOUL, *March 31, 1899.*

Imports from the United States into Korea in 1898.

Articles.	Value.	
	Yen.	
Shirtings, sheetings, and drills.....	27,591	\$13,795.50
Bicycles.....	1,461	730.00
Cement	4,993	2,451.50
Flour	38,204	19,102.00
Furniture	12,241	6,120.50
Haberdashery.....	19,593	9,751.50
Machinery.....	15,816	7,908.00
Mining supplies.....	80,659	40,329.50
Machine oil.....	4,010	2,005.00
Kerosene	378,760	189,380.00
Provisions	75,299	37,649.50
Railroad plant and material.....	595,723	297,861.50
Telegraph	5,906	2,953.00
Mines.....	10,000	5,000.00
Total	1,270,075	635,037.50

Total trade of Korea in 1898.

Description.	Value.	
	Yen.	
Total net imports from all countries.....	11,818,375	\$5,909,187.50
Total exports.....	5,709,489	2,854,794.50
Total trade.....	17,527,864	8,763,932.00
Export of gold.....	2,375,725	1,187,862.50

NEW COPYRIGHT LAW OF JAPAN.

I give below translation by the Japan Gazette of the newly enacted copyright law of Japan:

LAW NO. 39.—LAW OF COPYRIGHT.

CHAPTER I.—RIGHTS OF AUTHOR.

ARTICLE I. The author of documents, lectures, drawings and paintings, designs for engravings, photographs, and other matters belonging to the province of literature, science, and the fine arts shall have exclusive right of reproducing his work. The copyright of literary and scientific productions includes the right of translating them, and that of all kinds of theatrical plays and musical notes includes the right of their performance in public.

ART. II. The copyright can be transferred to another person.

ART. III. The copyright for productions published or exhibited shall remain in effect during the lifetime of the author concerned, and may be continued for thirty years after his death. The copyright of joint productions of many persons may be kept in effect for thirty years from the death of the person who died last.

ART. IV. The copyright of posthumous productions may be kept in effect for thirty years from the date of their first publication or exhibition.

ART. V. The copyright in works under nom de plume or in anonymous pro-

ductions may be kept in effect for thirty years from the date of their publication or exhibition, provided that Article III be applied if the true name of the author is registered during the interval.

ART. VI. The copyright of works published or exhibited in the name of Government or public offices, schools, temples, shrines, associations, companies, or other bodies shall continue in effect for thirty years from the date of publication or exhibition.

ART. VII. The author will lose the right of translating his original works if he does not publish the translation within ten years from the date of publication of his ordinary work.

If the author has published the work translated into the language for which he wants to receive protection within the foregoing period, the right of translating into that language will not be lost.

ART. VIII. When works are to be published volume after volume, the calculation of the periods mentioned in the foregoing articles will be commenced from the date of publication of each volume.

In case works are gradually published in parts one by one until they are completed, the periods mentioned in the foregoing articles shall be counted from the date of publication of the last part; provided that if such works are not completed within three years, the last part of the works published by that time shall be considered as the final part of the works.

ART. IX. In calculating the period of time during which copyright is in effect, in the cases of the foregoing six articles, the calculation will be commenced from the year following that of the death of the author or of the publication or exhibition of his works.

ART. X. The copyright will disappear when there is no successor.

ART. XI. The following can not be made the object of copyright:

- (1) Legal instructions and Government and public documents.
- (2) Miscellaneous reports, political opinions, or current topics mentioned in newspapers and periodicals.
- (3) Lectures or speeches delivered in open judicial courts, Diet, or political assemblies.

ART. XII. The publisher or exhibitor of *nom de plume* or anonymous works can hold the right belonging to the author, provided that this is expected if the author has registered his true name.

ART. XIII. The copyright of works produced jointly by several persons shall be their common property.

When an author refuses to publish or exhibit works, in cases where the part of the work borne by each author is uncertain, the other may obtain his share by paying compensation to the refuser, provided that this will be excepted in cases where an agreement to the contrary exists between the parties. In case the part of the work borne by each author is known, and one or more of them refuses to publish or exhibit the works, the other authors may separate the parts they have done and publish or exhibit them, provided that this will be excepted if an agreement to the contrary exists.

In the case of clause 2 in this article the name of an author who has refused to publish or exhibit the works can not be mentioned in the works to be published.

ART. XIV. Persons who have edited several works according to regulations shall be recognized as authors, and they can enjoy copyright for the whole of the works edited, provided that the copyright of each work shall belong to the respective author.

ART. XV. Persons entitled to copyright may obtain the registration of copyright.

Unless the author registers the copyright of works he has published or exhibited, he can not institute civil action against plagiarists.

The transfer or hypothecation of a copyright can not be set up against a third party unless such transfer or hypothecation has been registered.

The author of works under *nom de plume*, or of productions for which he gives no name, may obtain the registry of his true name.

ART. XVI. The registration will be executed by administrative offices.

The regulations relating to registrar will be determined by instructions.

ART. XVII. No original copy and copyright of works which have not been published or exhibited shall be attached on behalf of creditors, provided that this will be excepted in case the author has agreed to it.

ART. XVIII. No person who has obtained the transference of copyright can change the name or title of author or alter or revise the title or contents of the works without the consent of the author.

ART. XIX. No new copyright will be obtained by adding kana, punctuation, inflection, criticisms, notes, supplement, or drawings to original works or by making other revision, addition, or reduction remodeling the original work, provided that exception will be given to those which can be considered as new works.

ART. XX. Any article or note published in newspapers and periodicals (novels and fictions excepted) may be reproduced by giving its origin if the author does not conspicuously mention in his paper that its transference is prohibited.

ART. XXI. Persons who have made translation in accordance with regulations will be recognized as authors, and they are entitled to the protection of this law.

As to works the right of translating which has disappeared, the translator can not prevent others translating the works.

ART. XXII. Persons who reproduced fine-art works in accordance with law and with arts different from the one by which the original works have been made will be recognized as authors, and they are entitled to the protection of this law.

ART. XXIII. The copyright of photographs shall be kept in effect for ten years. The foregoing period of time will be counted from the year following that of the first issue of works. If not issued, it will be counted from the year following the one in which the original plates are made. Persons who reproduce fine-art works in accordance with law and with the art of photography may be entitled to the protection of this law during the same period as the one given to original authors, provided that where a special restriction is agreed to between the persons concerned it shall be observed.

ART. XXIV. The copyright of photographs inserted in literary or scientific works and made or caused to be made specially for the works shall belong to the author of such literary or scientific works and be continued in effect for a period of time similar to that allowed to the author for the works.

ART. XXV. The copyright of photographs and portraits made at the request of other persons shall belong to the persons who have made such request.

ART. XXVI. The provisions relating to photographs shall be applied to works made in accordance with the art similar to that of photography.

ART. XXVII. Works the authorship of which is uncertain, and which have not been published or exhibited, may, in accordance with instructions, be published or exhibited.

ART. XXVIII. The provisions of this law shall be applied with respect to the copyright of foreigners (those specially determined by treaty excepted); provided, that in case no provision is made in the treaty relative to the protection of copyright, those foreigners who have published their works for the first time in the Empire shall alone be entitled to enjoy the protection of this law.

CHAPTER II.—PLAGIARISM.

ART. XXIX. Persons who have violated copyright shall be considered as plagiarists, and they shall be held responsible for the damage resulting therefrom provided for in this law and in chapter 5 of Section III in the civil code.

ART. XXX. To reproduce works already issued in the following ways shall not be considered as plagiarism:

(1) To make reproductions without the idea of issuing them and without conforming to mechanical or chemical method.

(2) To condense and quote in one's own works within due limits.

(3) To extract and edit within the proper limit for the purpose of adapting them for elementary moral text-books and readers.

(4) To insert phrases and clauses in literary and scientific works in plays made by oneself or to adopt them in his own musical compositions.

(5) To insert fine-art works as material for explaining literary or scientific work; or vice versa.

(6) To make drawings or paintings into designs for engravings or molds for engravings into drawings or paintings.

In all the cases in this article the origin of works shall be clearly indicated.

ART. XXXI. Persons who import plagiarized works with an object of distributing them for sale in the Empire shall be considered as plagiarists.

ART. XXXII. Persons who have published explanatory answers of questions made for training purposes shall be considered as plagiarists.

ART. XXXIII. Persons who have made plagiarist works with fair intention and without fault and received profits thereby, causing other persons to suffer loss, shall be held responsible to repay such amount as is within the limit of amount gained.

ART. XXXIV. The copyright holder of works made jointly by a number of persons may prosecute against plagiarism without the consent of other copyright holders and claim compensation and damages for his share or the repayment of profits mentioned in the preceding article in proportion to his own share.

ART. XXXV. When a civil suit is instituted against plagiarists, persons whose names are mentioned in the works as authors shall be considered as the authors.

In the case of works under *nom de plume* or anonymous works, the person whose name is given as publisher shall be considered as the publisher.

In the case of the exhibition of plays and musical compositions not yet published, the person who is given in the exhibition as the author shall be considered as the author.

When the name of an author does not appear in a play or musical composition, the performer shall be considered as the author.

ART. XXXVI. When civil or criminal suit is instituted against plagiarists, the court can suspend the sale of the works supposed to be plagiarized or attach them or suspend their exhibition, with or without causing the accuser or the plaintiff to give sureties, in accordance with the latter's wish. If on trial it is found that the works in the foregoing clause are not plagiarized, the plaintiff shall be held responsible for all losses arising from their suspension or attachment.

CHAPTER III.—PUNISHMENT.

ART. XXXVII. Plagiarists or persons who have knowingly sold or distributed plagiarized works shall be punished by a fine ranging from 50 to 500 yen (\$24.90 to \$249).

ART. XXXVIII. Offenders against Article XVIII shall be punished by a fine of from 30 to 300 yen (\$14.94 to \$149.40).

ART. XXXIX. Persons who have reproduced works without mentioning their origin in violation of Article XX and clause 2 of Article XXX and persons who have

violated the provisions of clause 4 of Article XIII shall be fined from 10 to 100 yen (\$1.98 to \$49.80).

ART. XL. Publishers of works on which the name and title of a person other than the author is mentioned shall be punished with a fine of from 30 to 500 yen (\$14.94 to \$249).

ART. XLI. Persons who have made alterations in the works of other persons and injured their authors or changed their title, or have hidden the names and titles of the authors and published the works as works of other persons, shall be punished, even though the copyright of the original works has disappeared, by a fine of from 20 to 200 yen (\$9.96 to \$99.60).

ART. XLII. Persons who have obtained the registration of plagiarized works shall be fined from 10 to 100 yen (\$1.98 to \$49.80).

ART. XLIII. Plagiarized works and instruments and apparatus employed for plagiarism shall be forfeited when they are in possession of the plagiarists or other persons concerned.

ART. XLIV. The offenses alluded to in this chapter shall be dealt with only when an action is brought by the aggrieved party, provided that this is to be excepted when the author has died, in the case of Article XXXVIII or of Articles XL and XLII.

ART. XLV. Prescription of public action against offenses in this chapter shall be acquired by the lapse of two years.

CHAPTER IV.—SUPPLEMENTARY RULES.

ART. XLVI. The date of operation of this law shall be determined by imperial decree. Copyright law (issued in 1893 under law No. 16), regulations for theatrical plays and musical compositions (issued in 1887 under imperial decree No. 78), and copyright law for photographs (issued in 1887 under imperial decree No. 79) shall be abolished from the date on which this law comes into force.

ART. XLVII. Works the copyright for which does not disappear before the coming into force of this law shall enjoy the protection of this law.

ART. XLVIII. The reproduction of works which are not recognized as plagiarized and which have been reproduced or are being reproduced before this law comes into force may be completed and distributed for sale.

The instruments and apparatus used in making the reproductions mentioned in the preceding clause may be used for five years from the date of operation of this law, if they exist.

ART. XLIX. The translation of works which are not recognized as plagiarized and which have been translated or are being translated before coming into operation of this law may be completed and distributed for sale, provided that the translated works are required to be published within seven years from the date of coming into force of this law.

The translated works mentioned in the foregoing clause may also be reproduced within five years from the date of their publication.

ART. L. Works which are not recognized as plagiarized and which have been or are being exhibited before the coming into force of this law may be exhibited for five years from the date of operation of this law.

ART. LI. In the case of Article XLVIII or of Article L, reproductions can not be distributed for sale or exhibited unless the necessary provisions prescribed by decree shall be fulfilled.

ART. LII. This law shall not be applicable to architectural matters.

JOHN F. GOWEY,
Consul-General.

YOKOHAMA, *March 11, 1899.*

NEW TRADE-MARK LAW OF JAPAN.

The secretary of the legation at Tokyo, Mr. Herod, sends, under date of March 31, 1899, a copy of the trade-mark law passed by the last Japanese Diet, as follows:

[From the Japan Gazette, Yokohama, March 25, 1899.]

TRADE-MARKS LAW.**LAW NO. 38.**

ARTICLE I. Any person wishing to make exclusive use of a trade-mark to distinguish his own merchandise, shall obtain registration of the device chosen according to this law.

ART. II. Letters, diagrams, or marks which correspond with the following designs will not be registered as trade-marks:

(1) Those which are exactly similar to the imperial chrysanthemum escutcheon or resemble it.

(2) Those which are exactly similar to or resemble a national or naval or military flag or decorations or a foreign national flag.

(3) Those which are liable to disturb public order, injurious to public morals, or apt to deceive the public.

(4) Those which are exactly similar to or resemble one already in use for the same article by other persons, or one which has not for more than one year lost the effect of registration.

(5) Those which are exactly similar to or resemble one in use by another person prior to the coming into force of these regulations.

(6) Those which show the common name of an article or its place of production, or which show its grade, quality, or shape by customary commercial letters, diagrams, or marks, or which mention commonly used names of persons, companies, or partnerships or business names by common type of letters.

(7) Those which have no inclosure, figured ground, or other conspicuous marks.

ART. III. The period of time during which a trade-mark can be exclusively used shall be twenty years, counted from the date of registration.

The term of exclusive use of the trade-marks registered in foreign countries and also in the Empire afterwards shall be the one allowed in the original registration, provided that it shall not be allowed to exceed twenty years.

ART. IV. Persons desirous of continuing the use of their trade-marks after the term of their exclusive use has expired may apply for a fresh registration.

ART. V. The exclusive use of trade-marks is limited to articles indicated by applicants according to the distinctions prescribed by the Minister of Agriculture and Commerce.

ART. VI. When the holder of a trade-mark wishes to transfer his business to another person or engage in business jointly with him, he may transfer or hold in common his trade-mark. In this case, he can not set up against a third person unless an application is made to the patents bureau and the change registered.

When the holders of a trade-mark for a similar article own trade-marks resembling it, they can not obtain registration under the foregoing clause unless they make transfers mutually or hold in common or abandon the use of such similar trade-marks.

ART. VII. Persons wishing to obtain the registration of a trade-mark shall apply to the director of the patents bureau. The application should be accompanied

by samples of the merchandise on which a trade-mark is affixed, and in it should be given descriptions of merchandise for each trade-mark.

ART. VIII. When two or more than two persons have applied for the registration of trade-marks similar to or resembling another for a similar article, the registration will be allowed to the person who has applied first; when two or more applications are filed simultaneously, neither shall be registered; provided that this shall not apply to cases where all the applicants are reduced to one person [by the withdrawal of the others].

ART. IX. When persons who have made an application for the registration of their trade-marks in a country belonging to the international union for the protection of industrial rights have applied for the registration of a similar trade-mark within four months from the date of the original application, the new application shall have the same effect as the one made on the day of the original application.

ART. X. When the trade-marks registered are found to be in violation of Article II or VIII, the registration shall be null and void; provided that this shall not be applied to cases where those trade-marks which correspond with No. 4 or 5 of Article II or which conflict with Article VIII and have passed three years since their registration.

ART. XI. In the following cases, the director of the patents bureau may cancel the registration:

(1) When the holder of a trade-mark has embodied untrue statements in it relating to the place of production or quality of commodities on which the trade-mark is used after its registration is made.

(2) When the holder of a trade-mark has not, without valid reason, appointed the agent referred to in Article VI of the patents regulations in accordance with Article XX within six months.

ART. XII. The right to exclusive use of a trade-mark ceases with the abolition of the business by the holder of registered trade-mark.

ART. XIII. Any person desirous of obtaining the registration of his trade-mark shall pay a fee of 30 yen (\$14.94) for each kind of commodity on which a trade-mark is used. The same shall apply when a trade-mark is renewed.

ART. XIV. The patents bureau shall issue the trade-marks Official Gazette and publicly notify all necessary matters relating to the registration of a trade-mark.

ART. XV. When a witness or an appraiser has made false statements or judgment to the patents bureau or a court by which he has been requested to give evidence, he shall be punished with major imprisonment from one month to one year and a fine ranging from 5 to 50 yen (\$2.49 to \$24.90).

Persons who have caused him to make false statements or judgment by bribes or other means shall be similarly punished.

When the offenders alluded to in the two foregoing clauses have given themselves up at the patents bureau or the court by which they have been requested before decision or judgment is given, they shall be acquitted of punishment.

ART. XVI. Persons who have manufactured, delivered, or sold a trade-mark similar to or resembling one belonging to another person knowing that it is the trade-mark of the latter, or who have used on their merchandise a trade-mark similar to or resembling that registered by another person, or who have knowingly sold or stored for sale such merchandise shall be punished with major imprisonment of from one month to two years or a fine of from 20 to 500 yen (\$9.96 to \$249).

Persons who have used boxes, covers, or other things in which merchandise is packed for similar commodities knowing that such boxes, etc., have a registered trade-mark of another person, or who have, with knowledge, sold or stored for sale such merchandise, or who have used a trade-mark similar to or resembling the registered trade-mark of another person in advertisements, signboards, or business circulars for the purpose of selling similar articles, shall be punished in like manner.

ART. XVII. Persons who have obtained the registration of a trade-mark by fraudulent representations, or who have affixed labels of registered trade-marks or marks resembling them on commodities for which no trade-mark has been registered, or who knowingly sold or stored for sale such commodities, shall be punished by major imprisonment of from fifteen days to one year or a fine of from 10 to 300 yen (\$4.98 to \$149.40).

Persons who have used in their advertisements, signboards, or business circulars a label showing that a trade-mark is registered or a mark resembling it, for the purpose of selling their goods without getting their trade-marks registered, shall be similarly punished.

ART. XVIII. In the case of Article XVI or Article XVII, a trade-mark and articles for its production shall be forfeited, and merchandise, boxes, covers, or other articles which could not be separable from the trade-mark will be ordered to be destroyed.

ART. XIX. Offenses under Article XVI shall be dealt with only on the production of an accusation by the aggrieved party.

ART. XX. The provisions in Articles VI-X, Articles XII, XIII, XV, XXI, XXIII, Articles XXVIII-XXXVII, Articles XLIII and LI in the patents regulations shall be applied with regard to trade-marks.

ART. XXI. When a guild composed of business men of the same line to which permission has been granted by the authorities concerned wishes to exclusively use its business mark for a trade-mark, registration may be obtained in accordance with these provisions.

The business mark registered according to the preceding clause shall be the same as a registered trade-mark.

Supplementary rules.

ART. XXII. These regulations shall be put into force from July 1, 1899.

ART. XXIII. The trade-marks regulations issued in 1888 under imperial ordinance No. 86 shall be abolished simultaneously with the coming into force of these regulations.

The trade-mark registered under the existing trade-marks regulations shall have the same effect as those obtained in accordance with these regulations.

Applications or claims which have not been settled before these regulations come in force shall be considered as applications or claims made according to these regulations and dealt with accordingly.

ART. XXIV. For trade-marks which correspond with No. 3 of Article II in the trade-marks regulations issued in 1888 under imperial ordinance No. 86 or those which have been registered in violation of Article VIII of the same regulations, and should be null and void, a trial for making their registration null and void, according to Article X of the same regulations, may not be claimed after the expiration of two years from the date of operation of these regulations.

PATENTS AND TRADE-MARKS REGISTERED IN JAPAN.

I forward herewith a statement giving official statistics relative to patents, trade-marks, and designs registered in Japan from November 18, 1896—the date upon which foreigners were first enabled to secure protection—to December 31, 1898. The remarkably small number of patents issued is due to the exclusion of any invention

not absolutely novel or which has been made public in any manner previous to application for letters in Japan. Many valuable foreign trade-marks have been appropriated and even registered by Japanese here. Such registration has, under rulings of the Japanese patent bureau, been held sufficient to prevent the subsequent application resulting in protection or adequate redress to the lawful foreign owner of the mark.

By a law passed at the late session of the Japanese Parliament, a translation of which I shall shortly forward to the Department, foreign inventors will be allowed seven months' time from application abroad within which they can apply for Japanese letters patent.

JOHN F. GOWEY,
Consul-General.

YOKOHAMA, *March 14, 1899.*

Statistics of patents, trade-marks, and designs in Japan from November 18, 1896, to December 31, 1898.

Applications.	Filed.	Registered.	Rejected.	Pending.	Annulled or withdrawn.
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
By foreigners:					
Patents	239	18	4	217	.....
Trade-marks.....	2,437	1,928	277	127	105
Designs	13	10	.....	3	.....
By Japanese:					
Patents	3,252	316	523	2,065	348
Trade-marks.....	3,483	1,867	603	740	273
Designs	623	83	175	263	102

JAPANESE LAWS RELATING TO FOREIGNERS.

Mr. Herod, secretary of the legation at Tokyo, sends, under date of March 31, 1899, printed translations of laws relating to foreigners passed by the last Japanese Diet, as follows: Naturalization law, tonnage dues regulations, law relating to the use of seals by foreigners, and the right of legal succor. The laws read:

NATURALIZATION LAW.

ARTICLE I. A child whose father is a Japanese subject, when born, shall be a Japanese subject. If his father, who died before he was born, was a Japanese subject, the child shall also be a Japanese subject.

ART. II. When a father has lost Japanese nationality by divorce or separation prior to the birth of a child, the provisions in the preceding article shall be applied back to the beginning of the pregnancy of the mother.

The provisions in the foregoing clause shall not be applied to cases where both father and mother have left their family, provided that this shall not be applicable

when the mother has been restored to her original registration prior to the birth of the child.

ART. III. In cases where the father is unknown, or where he has no nationality, if the mother is a Japanese subject, the child shall be Japanese.

ART. IV. If both the father and mother of a child born in Japan are unknown or have no nationality, the child shall be Japanese.

ART. V. A foreigner shall acquire Japanese nationality in the following cases:

- (1) When she (if a female) becomes the wife of a Japanese.
- (2) When he (if a male) is adopted [into a family] as the husband of a Japanese.
- (3) When recognized by a Japanese father or mother.
- (4) When adopted as the son or daughter of a Japanese.
- (5) When naturalized.

ART. VI. In the acquiring of Japanese nationality by foreigners by recognition, the following conditions are required to exist:

(1) That the foreigners are in the age of minority according to the law of their original countries.

(2) That they (if females) are not wives of foreigners.

(3) That either father or mother, whichever first recognizes the child, shall be Japanese.

(4) That when both father and mother have recognized the child at the same time, the father shall be Japanese.

ART. VII. Foreigners may be naturalized by obtaining the permission of the Minister for Home Affairs.

The Home Minister shall not be allowed to give permission for naturalization unless the following conditions are complete:

(1) That the applicants shall have their domicile in Japan for five consecutive years or upwards.

(2) That they shall be 20 years of age or upwards and have qualifications according to the laws of their original countries.

(3) That they shall be of upright character.

(4) That they shall own property or possess accomplishments which will enable them to lead an independent livelihood.

(5) That they shall have no nationality, or lose their nationality on account of acquiring Japanese nationality.

ART. VIII. The wife of a foreigner shall not be allowed to be naturalized unless in company with her husband.

ART. IX. The following foreigners may be naturalized if they actually have their domicile in Japan, though the conditions in No. 1 in clause 2 of Article VII are not complete:

(1) Those whose fathers or mothers are Japanese.

(2) Those whose wives are Japanese.

(3) Those who were born in Japan.

(4) Those who have resided in Japan for ten consecutive years or upwards.

Those in Nos. 1 to 3 in the preceding clauses shall not be allowed to be naturalized unless they have resided in Japan for three consecutive years or upwards, provided that this shall not apply to cases where either father or mother in the case of No. 3 is born in Japan.

ART. X. Foreigners may be naturalized even though the condition in Nos. 1, 2, and 4 in clause 2 of Article VII are not complete, if they actually have their domicile in Japan and if either their father or mother is Japanese.

ART. XI. Foreigners who have rendered special meritorious services to Japan may be allowed to be naturalized by the Home Minister, subject to the imperial sanction, the provisions in clause 2 of Article VII notwithstanding.

ART. XII. Notice of naturalization is required to be given in the Official Gazette.

Naturalization can not be set up against a third party who has acted in good faith unless after such naturalization has been notified.

ART. XIII. The wife of a person who acquires Japanese nationality acquires Japanese nationality in company with her husband.

The provisions in the foregoing clause shall not apply to cases where there are contrary provisions in the law of the country to which the wife belongs.

ART. XIV. When the wife of a person who has acquired Japanese nationality has not acquired Japanese nationality in accordance with the provisions of the foregoing article she may be allowed to be naturalized even though the conditions in clause 2 of Article VII are not complete.

ART. XV. When a child of a person who acquires Japanese nationality is in the age of minority according to the law of its original country, it acquires Japanese nationality in company with its father or mother.

The provisions in the foregoing clause shall not apply to cases where there are contrary provisions in the law of the child's original country.

ART. XVI. Naturalized persons, children of naturalized persons acquiring Japanese nationality and persons who are adopted as husbands or sons of Japanese shall not be entitled to enjoy the following rights:

(1) To become a minister of state.

(2) To become the president, or vice-president of the Privy Council or a court councillor.

(3) To become an official of the imperial household of chokunin rank.

(4) To become a minister plenipotentiary.

(5) To become a commissioned officer of the army or navy.

(6) To become the president of the court of cassation, of the audit bureau, or of the court of administrative litigation.

(7) To become a member of the Imperial Diet.

ART. XVII. The Home Minister may remove, after obtaining an imperial sanction, the restrictions prescribed in the preceding article after the lapse of five years from the date of acquisition of nationality in the case of persons to whom naturalization has been allowed in accordance with the provisions in Article XI, and after the lapse of ten years in the case of other naturalized persons.

ART. XVIII. When a Japanese woman marries a foreigner, she loses Japanese nationality.

ART. XIX. Persons acquiring Japanese nationality by marriage or adoption shall lose Japanese nationality by divorce or separation only in cases where foreign nationality would necessarily be acquired.

ART. XX. Persons who have voluntarily acquired foreign nationality lose Japanese nationality.

ART. XXI. The wife or child of a person who has lost Japanese nationality loses Japanese nationality when the father's or husband's nationality is acquired.

ART. XXII. The provisions in the preceding article shall not apply to the wives and children of persons who have lost Japanese nationality by divorce or separation, provided that this shall be excepted in cases where a wife does not obtain divorce at the time of the separation from husband, or where a child has left the family in company with his father.

ART. XXIII. When a child of a Japanese has acquired foreign nationality by recognition, it shall lose Japanese nationality, provided that this shall not be applicable to cases where the child becomes the wife or is adopted as husband or son of a Japanese.

ART. XXIV. Boys of the age of 17 years and upwards shall, in spite of the preceding five articles, not lose Japanese nationality unless they have already sub-

mitted to the active service of the army or navy or unless they are under no obligation to submit to the service.

Persons who actually occupy civil or military posts shall not lose Japanese nationality unless they have lost their offices, the provisions in the preceding six articles notwithstanding.

ART. XXV. When persons who have lost Japanese nationality by marriage have their domicile in Japan after the marriage has been canceled, they shall be entitled to recover their Japanese nationality by obtaining permission of the Home Minister.

ART. XXVI. When persons who have lost Japanese nationality on account of the provisions in Articles XX and XXI, have their domicile in Japan, they may recover Japanese nationality by obtaining permission of the Home Minister, provided that this shall not apply to cases where the persons referred to in Article XVI have lost their nationality.

ART. XXVII. The provisions mentioned in Articles XIII to XV shall be applied to cases referred to in the foregoing two articles.

Supplementary rule.

ART. XXVIII. This law shall be put into force from April 1, 1899.

TONNAGE DUES LAW.

ARTICLE I. When vessels going to and from foreign countries for the purpose of foreign trade enter open ports, tonnage dues of 5 sen (2 cents) will be charged for each registered tonnage, or for every 10 koku* (four twenty-sevenths of a ton) of burden each time they enter; provided that if dues at the rate of 15 sen (7 cents) for each ton of registered tonnage or for every 10 koku are paid at once, no dues shall be required to be paid for one year at the port where such dues are paid.

The registered tonnage of vessels of a country which has a mode of measurement different from the Empire shall be converted in accordance with the metric system fixed in the Empire.

ART. II. Tonnage dues shall be paid to the custom-house by masters of vessels when such vessels enter ports.

ART. III. No tonnage dues shall be imposed on vessels which have entered ports on account of maritime disasters or other unavoidable causes, provided that this shall not apply to cases where the loading or discharging of cargo is done without being necessitated by any of the causes referred to in this article.

ART. IV. The superintendent of customs may, if he considers it necessary, take measurements of any vessel.

ART. V. When a vessel has cleared with the intention of avoiding tonnage dues or without paying them, the master of the vessel shall be punished with a fine corresponding to three times the amount of the dues not paid or which it was intended to avoid.

ART. VI. As regards the investigation and punishment of offenses, the customs law shall be applied; provided that the term during which a notice is to be carried out be not more than forty-eight hours from the receipt of such notice.

ART. VII. As to the collection of tonnage dues, the system of collection for national taxes shall not be applied.

Supplementary rule.

ART. VIII. The date of putting into force of this law shall be fixed by an imperial ordinance.

* 1 koku=about 5.13 bushels.

LAW RELATING TO THE USE OF SEALS BY FOREIGNERS AND THE RIGHT OF LEGAL
SUCCOR.

ARTICLE I. In cases where it is required to sign and seal according to the provisions of law, a signature will suffice in the case of a foreigner.

When a seal only is needed, foreigners may substitute a signature for it.

ART. II. Foreigners wishing to obtain legal succor in accordance with Article XCII of the law of civil procedure are, if they have no dwelling or residence in Japan, required to prove that they are destitute of means as prescribed in Article XCIII of the same law, by producing a certificate from the government authorities in foreign country within the jurisdiction of which they have their dwelling or residence, provided that the certificate shall also be certified by the foreign consuls residing in Japan.

Foreigners having their dwelling or residence in Japan shall be required to give the testimony referred to in the preceding clause by producing a certificate from the chiefs of cities, towns, or villages where they have dwelling or residence, provided that in cases where the certificate from the chiefs of cities, towns, or villages can not be produced, or where the certificate is imperfect, the court may cause such foreigners to produce the certificate from their government authorities at home, certified by the consuls residing in Japan.

Supplement.

ART. III. The date of putting this law into force shall be determined by an imperial decree.

TRADE OF CHUNGKING IN 1898.

The trade of this port shows a decline for 1898, as compared with that of the previous year. The falling off is due to the partial rebellion in this province, which affected commerce during the last quarter of 1898. Were it not for this incident, the net value of the trade would, in my opinion, have been considerably greater.

I understand that a concession has been obtained by Mr. Pritchard Morgan to work mines in this province, and at the present moment English and American engineers are on their way hither for the purpose. A party of three Englishmen, one of whom is a captain in the royal artillery and another a lieutenant in the engineer corps, is now surveying a railway line to run from the neighborhood of Luchow, on the Yangtze, to Yunnan fu, the capital city of Yunnan Province; thence to Tali fu, in the same province, and on to the Burmese frontier. I believe more than one route will be surveyed, as the country is very mountainous. The building of this line of railway is said to be a strategic move on the part of the British Government.

With regard to the possibility of opening a wider market for American products and manufactures, which is the main point in a trade report, the present outlook, as I have said before, is not very encouraging. With the natural resources of the district still undeveloped and the defective means of communication with any trade

center, notable expansion in trade is not to be looked for. Our exporters must study the wants of the people in this Empire and try to meet them in so far as possible. The cheapness of labor in China is a disturbing factor in trade.

In a recent report, Mr. Brennan, of the British consular service, points out that if the interchange of commodities between the East and the West is to grow, it is the Western merchant who must discover what the Chinaman has to give us in exchange for our manufactures. The initiative must come from our side; until we can take more from China, she can not be expected to take more from us.

GEO. F. SMITHERS,

CHUNGKING, *February 24, 1899.*

Consul.

Value of the trade of Chungking from 1896 to 1898.

Description.	1896.	1897.	1898.
Foreign imports.....	\$5,619,381.69	\$6,248,520.78	\$5,528,877.31
Native imports.....	794,282.05	2,054,366.54	2,479,265.73
Exports of local origin.....	4,236,038.72	4,995,930.92	4,086,106.13
Gross value of the trade of the port.....	10,650,301.79	13,299,137.18	12,095,170.80
Net value of the trade of the port—i. e., foreign and native imports, less reexports and native exports of local origin.....	10,649,702.46	13,298,817.24	12,094,248.99

Principal articles of import from 1896 to 1898.

Description.	1896.	1897.	1898.
Shirtings:			
Gray, plain.....pieces...	374,542	459,394	399,346
White.....do.....	37,009	36,964	43,331
White Irishes.....do.....	13,856	15,753	7,500
Drills, American.....do.....	6,105	10,651	12,721
Sheetings, English.....do.....	18,968	24,550	19,593
Chintzes and furniture.....do.....	3,103	2,201	3,120
Cotton prints, plain.....do.....	33,632	16,011	6,800
Turkey-red cottons.....do.....	15,052	10,005	8,730
Cotton:			
Lastings.....do.....	33,580	24,973	36,324
Italians.....do.....	58,095	43,292	42,038
Yarn.....pounds...	22,750,933	30,837,867	29,630,800
Camlets, English.....pieces...	2,326	2,212	1,090
Lastings.....do.....	3,231	3,630	4,928
Long ells.....do.....	6,600	5,200	5,144
Spanish stripes.....do.....	3,600	3,220	2,463
Cloth, Russian.....do.....	1,735	1,073	646
Italian cloth.....do.....	10,096	12,602	8,986
Iron wire.....pounds...	139,467	91,467	172,133
Cotton, raw.....do.....	1,745,067	8,674,533	9,678,533
Dyes, aniline.....value...	\$72,640.46	\$49,732.44	\$69,063.41
Medicines.....do.....	\$89,178.37	\$79,823.80	\$105,081.31
Oil, kerosene:			
American.....gallons...	23,510	75,780	55,020
Russian.....do.....	4,700	35,795	.....
Opium lamps.....pieces...	91,688	75,989	150,661

TRADE AND CUSTOMS REGULATIONS ON THE YANGTZE KIANG.

The Department has received from Consul-General Goodnow, of Shanghai, and Consul Martin, of Chinkiang, under date of March 15 and 18, 1899, respectively, copies of trade regulations for the Yangtze, published by the customs of China, as follows:

THE YANGTZE REGULATIONS, 1898.

ARTICLE 1. *Former regulations rescinded.*—The revised regulations of trade on the Yangtze Kiang (1862) having been amended and the substance of their provisions having been incorporated in the present Yangtze regulations, the said revised regulations of trade on the Yangtze Kiang are hereby abrogated, together with the port and customs regulations thereon dependent.

ART. 2. *Ports, stages, and passenger stations.*—The merchant vessels of the treaty powers are authorized to trade on the Yangtze Kiang at the following treaty ports:

Chinkiang, Nankin, Wuhu, Kiukiang, Hankau, Shasi, Ichang, and Chunking—and to land and ship goods in accordance with special regulations at the following nontreaty ports:

Tatung and Anking, in Anhwei; Hukow, in Kiangsi; Lukikow and Wusueh, in Hukwang.

Shipment or discharge of cargo at any other points on the river is prohibited, and any violation of the prohibition will be dealt with in accordance with the treaty provisions applicable to clandestine trade along the coast; but passengers and their baggage may be landed and shipped at any of the regular passenger stations, at present consisting of—

Luchingchiao (Tungchow district), Tienhsingchiao (Taihsing district), Kiangyin, and Iching, in Kiangnan; Hwangtzekang, Hwangchow, Chinghokow (also known as Chinghoniao), and Hsinti, in Hukwang.

Passengers' baggage must not contain articles subject to duty, and the presence of dutiable articles will render the whole liable to confiscation.

ART. 3. *Three classes of vessels.*—Merchant vessels trading on the river are to be divided into three classes—

First class, seagoing vessels trading for the voyage up river beyond Chinkiang.

Second class, river steamers running regularly between any of the river ports or Shanghai and any river port.

Third class, small craft (lorchas, papicos, junks, etc.).

The three classes of vessels will be dealt with according to treaty and the rules for the ports at which they trade.

ART. 4. *Seagoing vessels.*—Seagoing vessels trading no farther up river than Chinkiang will be dealt with at Chinkiang in every respect like vessels trading at other coast ports; but seagoing vessels on a voyage farther up river than Chinkiang become hereby vessels trading on the river of the first class set forth in the preceding article. Such merchantmen, whether steamers or sailing vessels, must deposit their registers with the consul, or, if consularly unrepresented, with the customs, at Shanghai, Woosung, or Chinkiang. where the customs, on receipt of a consular application or a deposit of papers, will issue a certificate to the vessel, to be called the "special river pass," on which shall be entered the vessel's name, flag, registered tonnage, general cargo, and armament. The vessel may then proceed

up river and at whatever treaty ports she trades must report and clear, load and unload cargo, and pay dues and duties in the same manner as at other treaty ports along the coast. On return to the port that issued it—Chinkiang, Woosung, or Shanghai—the “special river pass” is to be surrendered to the customs, and the customs, on having ascertained that all the dues and duties have been paid and all other conditions satisfied, will then issue the grand chop to enable the vessel to procure her register and proceed to sea.

ART. 5. *River steamers*.—Any steamer intended to trade regularly on the river may deposit her register at the consulate at Shanghai, or, if consularly unrepresented, at the custom-house, when the customs, on the receipt of a consular application or on the deposit of the register, will issue a certificate, on which shall be entered the vessel's name, flag, registered tonnage, and armament, to be called the “river pass,” that shall be valid during the current year. Such “river pass” must be renewed every year either at Shanghai, or at Hankau or Ichang in the case of river steamers trading above those places and not returning to Shanghai.

River-pass steamers will report and clear, load and discharge, and pay dues and duties in accordance with the customs regulations of the port concerned; their tonnage dues are to be paid at the ports which issue or renew the river pass (Shanghai, Hankau, or Ichang).

Infringement of river port regulations will be punished by the infliction of the penalties in force at other treaty ports; for a second offense, the river pass may be canceled and the steamer refused permission to trade thenceforward above Chinkiang.

Any steamer not provided with a river pass, if proceeding above Chinkiang, will come under the rule affecting seagoing vessels laid down in article 4 and will be treated accordingly.

ART. 6. *River-pass steamers' cargo*.—The former regulation having been abrogated which made it obligatory to deposit coast-trade duties simultaneously with paying export duties, river-pass steamers will now pay duties in the same way as vessels at other treaty ports along the coast; that is, export duties at the port of departure before shipment of exports, and import or coast-trade duties at the port of discharge before release of imports, and, similarly, they will ship, transship, and discharge cargo after report, examination, and issue of permit, in the same way as vessels at treaty ports along the coast.

When tea is landed by a river-pass steamer, the consignee, instead of paying coast-trade duty, may deposit a bond for the amount. On proof of reshipment within a year, the bond will be canceled. When reshipped tea is relanded at another port—*e. g.*, reshipped at Hankau and relanded at Shanghai—a new bond will be required in lieu of coast-trade duty, to be canceled on subsequent reshipment; and so on.

ART. 7. *Small craft (lorchas, papicos, junks, etc.)*:

(a) Lorchas, etc., owned by foreigners, if provided with registers and entitled to fly national flags, are required to take out a special river pass either through the consulate or from the customs direct at Chinkiang if proceeding farther up the river. They will report, work cargo, and pay duties like other seagoing special-river-pass vessels.

(b) Papicos, etc., owned by foreigners, but not provided with registers or entitled to fly national flags, are to take out customs registers at the port they belong to and report, work cargo, and pay duties in the same way as lorchas, etc.

(c) Chinese junks chartered by foreigners are only available for conveying foreign-owned cargo from treaty port to treaty port; they must take out special junk papers at the customs, to be obtained in exchange for bonds executed at and deposited with the customs, the condition of the bond being that the cargoes are bona

fide foreign property and will be landed and pay duty at a treaty port, and the penalty that if the cargoes fail to be so landed and pay duty no chartered junk will thereafter be cleared for the foreigner in question. Such junks to report, work cargo, and pay duties in the same way as lorchas, papicos, etc.

ART. 8. *Cargo certificates*.—Special-river-pass merchantmen, river-pass steamers, and lorchas, papicos, and junks, etc., must apply to the customs at the port of departure for a cargo certificate (tsuug tan), which, on the vessel's arrival at the port of destination, must be handed in to the customs before permission to discharge can be given. The vessel will be responsible for the duties on all goods entered on the said cargo certificate and not landed on permit at port of discharge.

ART. 9. *Miscellaneous*.—Any trading vessel falling in with a revenue cruiser or customs boat on the Yangtze Kiang is to produce her papers for inspection if examination of them is required. Vessels unprovided with proper papers will be dealt with under the treaty articles, penalizing clandestine trade along the coast.

The customs may seal the hatches of any vessel trading on the Yangtze and may place customs officers on board to accompany her on the trip, whether up stream or down.

Special-river-pass vessels of the first class are not required to anchor to exhibit their papers at the intermediate ports passed and not traded at.

ART. 10. *Yangtze customs and port regulations*.—The adoption and promulgation of new regulations for vessels trading on the Yangtze having rendered meaningless sundry customs and port regulations which guided procedure under the former system, and having necessitated the substitution of fresh regulations and different practice* under the system now introduced, the ports concerned (Shanghai, Chinkiang, Nankin, Wahu, Kiukiang, Hankau, Shasi, Ichang, and Chunking) will proceed forthwith to arrange and publish new rules and regulations, and these are, on the one hand, to facilitate trade, and, on the other, to protect revenue and prevent smuggling.

The above regulations are open to revision when and if necessary.

CUSTOMS REGULATIONS FOR YANGTZE PORTS.

All regulations hitherto existing, port and customs, having been declared abrogated and fresh regulations and different practice having been thereby necessitated, the following customs rules, drawn up to give effect to the Yangtze regulations of 1898, are now published for general information, and will be operative on and after the 1st day of April, 1899.

I.—GENERAL.

Anchorage.

(1) For the shipment and discharge of cargo, vessels must take up the berths in the harbor assigned them by the harbor master.

Cargo boats, sampans, etc., are forbidden to approach incoming vessels before they are properly moored.

Cargo boats.

(2) Cargo boats must be registered at the custom-house and their numbers conspicuously painted on them in English and Chinese.

Working cargo.

(3) The landing and shipment of cargo or ballast can only take place between sunrise and sunset, and can not go on without special permission on Sundays or holidays.

Cargo landed or shipped without a permit is liable to confiscation.

Shut-out cargo.

(4) Cargo for which a shipment permit has been issued but which can not be received on board, must be reported and await customs examination before being relanded.

Imports to be discharged before loading exports.

(5) River-pass steamers excepted, merchant vessels must complete the discharge of import cargo before commencing to receive on board exports.

Foreign opium.

Foreign opium must be landed into the customs opium godown.

Munitions of war.

Munitions of war can not be landed until a munitions special permit from the customs has been obtained.

Invoices.

In case foreign goods from abroad are to pay duty at a river port, the importer may produce his bona fide invoice; if the invoice does not include freight and insurance, 10 per cent will be added to the invoice value in the case of goods paying ad valorem duty; but the customs reserve the right not to accept invoices as a statement.

Through cargo.

Through cargo from Ichang to Shanghai, and vice versa, may be applied for at Hankau, to be transhipped en bloc.

Exemption and duty-paid certificates, etc.

Exemption and duty-paid certificates, etc., should be presented to the customs simultaneously with the consignee's application for discharge permits.

Export.

(6) Goods for export must in all cases be brought to the customs jetty or in specially allowed cases to godowns approved by the customs, or to hulks, and will be examined by the customs upon the receipt of application for shipment permit, giving all necessary particulars—destination, denomination, number of packages, marks, numbers, weight, value, etc.—and made out in Chinese and English. Godowns with examined export cargo may be locked by the customs, and, similarly, the hatches of cargo boats with such goods may be sealed, and the merchandise must not be removed until after payment of duty and issue of permit. After examination, a customs memo. will be issued, and upon the production of the bank receipt for the duty, the shipment permit will be granted (*i. e.*, the shipping order will be stamped).

Duties (Shanghai practice).

(7) Cargo from or to river ports being now required to pay duties in the same manner as at coast ports—*i. e.*, export duty before shipment and import or coast-trade duty at the port of discharge before release—the following changes in local procedure are necessitated at Shanghai:

(a) *Imports from river ports.*—Import applications for discharge permits will be required in all cases, and goods will be examined. Goods of Chinese origin will pay coast-trade duty if provided with duty-paid certificates, and will also lodge a full export duty if without such certificates; foreign goods, unless covered by an exemption certificate, will pay import duty.

Reexport certificates for imports reshipped after arrival will no longer be required or issued for return to original port.

(b) *Exports to river ports*.—Chinese goods will pay export duty before shipment and coast-trade duty at ports of arrival, and will go forward under cover of a duty-paid certificate.

(c) *Reexports to river ports* will be treated in the same manner as reexports to coast ports; that is, Chinese goods will be granted coast-trade-duty drawbacks and go forward under duty proof, paying coast-trade duty at port of reentry. Foreign goods may, at applicant's option, go forward under exemption certificate, or apply for drawback and pay import duty at destination.

Applications to reexport should be made out on the usual reexport form, and applicants must be careful to state what document is required (*e. g.*, exemption-certificate drawback, etc).

(d) *Transshipments*.—Goods intended for transshipment at Shanghai, if from river ports, should be so described on the export application at the port of shipment; failing such description, they will be liable to examination and payment of duty at Shanghai. Imports from abroad for transshipment to river ports must be applied for on transshipment application form. Goods originally declared for Shanghai, but the destination of which, either before or on arrival of the goods at Shanghai, it is subsequently desired to change, must be applied for on a transshipment application form, or they will be subjected to examination and payment of duty.

Transshipments must in all cases take place within five days after arrival of importing vessel, otherwise the goods concerned will be treated as imports. All goods in course of transshipment are liable to examination if required by the customs.

Tea bonds.

(8) When tea is landed by a river-pass steamer, the consignee, instead of paying coast-trade duty, may deposit a bond for the amount; on proof of reshipment within a year, the bond will be canceled. If not reexported within that period, the amount of coast-trade duty named in the bond will be collected. When reshipped, tea is relanded at another port—*e. g.*, reshipped at Hankau and relanded at Shanghai—a new bond may be tendered in lieu of coast-trade duty, to be canceled on subsequent reshipment; and so on. Bonds ought to be handed in for cancellation not later than one week after the shipment.

II.—SEAGOING VESSELS.

N. B.—Two classes of seagoing vessels visit Chinkiang, viz, those which do, and those which do not, pass on up river. The first follow coast-port rules; the second, Yangtze regulations.

(a) Chinkiang procedure.

(9) Seagoing vessels, Ningpo boats, lorchas, and such like craft, together with steamers not provided with a river pass, must be reported by the consul, or lodge their papers with the customs if they have no consul, on arrival at Chinkiang, and must deliver to the customs a manifest of the cargo on board (together with the tonnage dues and cargo certificates if they have them), after which the permit to open hatches will be issued.

Seagoing vessels trading no further up river than Chinkiang will be dealt with at Chinkiang in every respect like vessels trading at other coast ports—*i. e.*, the landing and shipment of cargo in accordance with the customs regulations having been completed, all dues and duties having been paid, and the manifest of the export cargo having been handed to the customs, the customs clearance will be issued, upon which the vessel may receive back her papers and clear at the consulate.

In the case of vessels arriving at Chinkiang from sea and, after working cargo there, about to proceed to a port farther up river, the landing and shipment of

cargo having been completed, all dues and duties having been paid, and a manifest of the cargo placed on board at Chinkiang having been handed to the customs, the customs clearance and cargo certificates will be issued, and upon the application of the consul who holds the ship's papers, or of the master in the event of the papers having been lodged with the customs, the ship's hatches will be sealed and a "special river pass" will be granted, upon which the vessel may leave the anchorage on her voyage up the river; if the ship's papers held by consul or lodged at customs are merely the "special river pass" issued at Shanghai or Woosung, that document ought to be viséed by the customs before departure. On the return to port from up river of vessels holding their "special river pass" from the Chinkiang customs, the clearances issued by the up-river custom-houses, together with a manifest of the cargo on board, must be handed in to the Chinkiang customs, when, upon the surrender of the "special river pass," the final customs clearance (Chinkiang grand chop) will be issued, and the vessel will be at liberty to receive back her papers and proceed to sea. "Special-river-pass" vessels from Shanghai or Woosung will similarly surrender the same papers there.

(b) *Up-river-port procedure.*

(10) On arrival at ports on the river above Chinkiang, vessels provided with the "special river pass" shall lodge that document with the consul or, where there is no consul, with the customs. Upon receipt of consular report or "special river pass," together with a manifest of the import cargo (which should be accompanied by tonnage dues and cargo certificates), the permit to open hatches will be issued, and on consignees applying, specifying on their applications, in Chinese and English, the nature of the goods, the number of packages, with marks and numbers, weight, value, etc., permits will be issued authorizing the discharge of consignments—

(a) Into registered cargo boats, which must repair to the customs jetty for examination, after which duty memos. will be issued and, on payment of duty, release permits will be granted authorizing the landing of the goods (*i. e.*, the bills of lading will be stamped); or,

(b) Under approved guaranty into cargo boats, godowns, or hulks, where they will be examined by the customs, after which duty memos. will be issued and, when duty is paid, release permits granted.

Up-river customs clearance.

(11) The landing and shipment of cargo having been completed and all dues and duties having been paid, a manifest of the export cargo must be handed to the customs before 3 p. m. The customs clearance will then be issued, on which the vessel may apply for the return of the "special pass" and proceed. The customs will be at liberty to seal the hatches and place customs officers on board to accompany vessels up or down river.

N. B.—The customs clearance or grand chop is simply a receipt for dues and duties, on the exhibition of which the treaties entitle vessels to recover the papers deposited at the consulate. It is the consulate clearance, and not the customs grand chop, that specifies the port to which a vessel is to go and constitutes her port clearance.

III.—RIVER-PASS STEAMERS.

Chinkiang and up-river procedure.—River-pass-steamer imports.

(12) Steamers plying under "river pass," on arrival at a port, whether bound up or down river, shall exhibit that document to the customs.

(13) River-pass steamers having on board cargo to be discharged shall deliver the cargo certificate for the port concerned and which was issued at the port of

shipment, together with the inward manifest signed by the master and the tonnage-dues certificate, to the customs, whereupon consignees of import cargo may hand in applications containing all necessary particulars, and submit their consignments to customs examination; after payment of duties, they will be granted release permits. For the discharge of a river steamer's total manifested cargo into registered cargo boats, hulks, and godowns, a general transshipment permit can be obtained on complying with the special rules therewith connected. No cargo shall leave cargo boats, hulks, or godowns without a permit. Merchandise arriving in excess of the quantity noted in the cargo-certificate manifest is liable to confiscation. The importing vessel will be held responsible for the duties of all goods entered on the cargo certificate and not landed.

River-pass-steamer exports.

(14) Goods for shipment by river-pass steamers must be reported for examination, pay duties, and take out shipment permits in just the same way as goods for shipment by other vessels.

Customs clearance.

(15) River-pass steamers neither landing nor shipping cargo may proceed on their voyage after the inspection of the river pass by the customs. Steamers with cargo to land or ship are to hand the export manifest to the customs, when they have completed landing and shipment; the cargo certificates will then be issued and the river pass and tonnage-dues certificate returned to the master. The steamer may then proceed on her voyage.

IV.—SMALL CRAFT (LORCHAS, PAPICOS, CHARTERED JUNKS, ETC.).

Lorchas, etc.

(16) Small craft (lorchas, papicos, junks, etc.), owned or chartered by foreigners, will be treated in accordance with the Yangtze regulations of 1898. They are to take up the berths assigned in the proper anchorage, and report, work cargo, and pay duties, etc., like seagoing special-river-pass vessels. Chartered junks are only available for carrying foreign-owned cargo from treaty port to treaty port, and must take out special papers at the customs in exchange for properly executed bonds.

Steam launches.

(17) All steam launches, etc., must be registered at the custom-house. The fee for first issue of customs papers is 10 haikwan taels and for each annual renewal 2 haikwan taels.

KYAO-CHAU HARBOR REGULATIONS.

Ambassador White sends from Berlin, under date of April 6, 1899, copy of the Official Gazette, containing regulations for the harbor of Tsintau, Kyao-chau. A translation reads:

(1) The harbor jurisdiction of Kyao-chau Bay is divided into an outer and an inner roadstead. The outer, or Tsintau, roadstead is bounded by a line traced from Pile Point to the eastern corner of the so-called Clara Bay and a cross line from Cape Evelyn to Yu-nui-san. The inner roadstead begins at the last-named line and is bounded on the north by a line from Woman's Island to the north end of Chiposan.

(2) The captain of a ship entering must obey the orders of the harbor master in regard to the assignment of the place for anchoring.

(3) The ship's captain, on arrival and departure of his vessel, must exhibit his register to the port authorities. The register will be returned to him after the receipt of clearance papers and the payment of the port dues of $2\frac{1}{2}$ cents per registered ton.

(4) The captain is bound to present to the Chinese customs a true statement (manifest) of the goods on board, which shall give the number of the boxes, marks, numbers, contents, etc., and the statistical statements, which shall be verified on demand.

Opium shall be imported only in original packages. The import of smaller quantities is forbidden. Opium must be declared immediately upon arrival before the officer who is to superintend the transportation to the custom-house. Violations of this rule will be punished with confiscation of the opium and a fine up to five times the value of the same—at least \$500.

(5) The importation of weapons, powder, explosives, and ingredients serving for the same is subject to official control. These goods, on arrival, must be at once declared to the harbor authorities. Vessels loaded with petroleum or explosives must anchor in the position appointed for such vessels on the chart, until the cargo is discharged under the supervision of one of the harbor officials. These vessels must have a red flag on the foremast. Before receiving the above-designated articles on board of vessels in the harbor, the permission of the harbor master must be obtained; these instructions must be followed in every case.

(6) Vessels having contagious disease on board must carry a yellow flag on the foremast. Before receiving the permission of the harbor master, no one is allowed to leave the ship or to hold intercourse with the land.

(7) During the loading or unloading of vessels, the national flag must be raised.

(8) The inspection of a ship's crew is made at the office of the harbor master or at the office of the ship's accredited consul. Every man must, within twenty-four hours after the inspection by the consul, according to the muster roll, report himself to the harbor master. The sailing master can not leave behind any of the ship's crew without the permission of the harbor master or of the ship's recognized consul. In the event of seamen left behind, when aid is provided for them, the license is given, subject to the condition that the sailing master gives security for the aid for a period up to three months. No seaman can, of his own accord, remain behind in the port.

(9) Deserters from ship's crew can be retaken by the interposition of the harbor officials and brought back on board of the ship. Vessels and residences can be searched for the same. Persons who give refuge to such seamen or whose desertion is known to them become subject to a fine.

(10) The captain is obliged to announce the death of any passenger or seaman which takes place in the harbor to the harbor master, as well as to inform the port officials. The announcement to the port officials does not take place if the deceased is a Chinese.

(11) In cases of disputes between sailing masters and the crew of a vessel whose country is not represented by a consulate in the harbor jurisdiction, the dispute is settled by the harbor master. For the execution of his decision, the harbor master is authorized to exact a penalty up to \$350 or imprisonment for six weeks for the continuance of the dispute.

(12) Every vessel anchoring in the harbor jurisdiction must show a white light in a visible place from sunset to sunrise.

Fire on board and mutiny is brought to the knowledge of the harbor master by ringing the bells or by flag signals.

(13) It is forbidden to throw ballast, ashes, or refuse into the water of the harbor. The disposal of the contents of closets of anchoring vessels is, on the other hand, allowable.

Everyone is bound to remove objects which belong to him or which are confided

to his keeping, if they occasion any disturbance in the harbor management. If the removal does not take place on the receipt of the summons, it can be effected at the expense of the owner by the port police.

Without the permission of the sailing master or of his representative, going on board ship is forbidden.

Without the consent of the sailing master or of his representative, it is forbidden to make fast to a ship, junk boats, lighters, or similar vessels.

(14) Buoys can be placed only by the permission of the harbor master. Buoys must be illuminated from sunset to sunrise. The buoys are under the control of the harbor master, who can place or remove them for the needs of commerce or for security.

(15) Infringements of paragraphs 10 and 14 of these regulations is punishable by a fine up to \$25; of sections 2, 3, and 12, up to \$100; of sections 5 and 6, up to \$2,000. Infringements of section 8 for the sailing master is subject to a fine up to \$100; for the sailor, up to \$25 or imprisonment for twenty-five days. Infringement of section 13 of the regulations is punishable by fine up to \$50 or imprisonment for one month. Those in section 9 concerning deserters are subject to a fine up to \$250 or with imprisonment for three months.

These ordinances go into effect on the day of publication.

TSINTAU, *January 15, 1899.*

ROSENDAHL,
Imperial Governor.

TRADE OF VLADIVOSTOCK.

The Department has received reports from Commercial Agent Greener, of Vladivostock, dated February 18 and March 31, 1899, giving figures from which the following tables are compiled:

Principal foreign goods imported into Vladivostock, East Siberia, in 1897 and 1898.

Articles.	1897.		1898.	
	<i>Foods.</i>	<i>Pounds.</i>	<i>Foods.</i>	<i>Pounds.</i>
Oranges	12,457	449,847	32,440	1,171,473
Asbestos	1,237	44,671	51,159	1,847,553
Drug goods	3,387	122,311	37,666	1,360,195
Pineapples	5,258	189,877	4,312	155,715
Alabaster	4,601	166,151		
Asphalt	22,380	808,187	53,682	1,938,564
Bottles, empty	1,994	72,007	16,885	609,750
Paper	13,757	496,793	9,838	354,053
Beans			71,072	2,566,552
Compressed	25,444	918,834	21,600	780,019
Grocery goods	7,450	269,034	21,397	772,688
Pails, iron			1,006	36,329
Cotton wadding	4,303	155,390	4,662	168,354
Railroad material	103,107	3,723,400	122	4,406
Water, mineral	3,511	126,789	1,519	54,854
Varnishes			12,673	457,647
Nails	14,320	517,124	32,378	1,169,234
Finery			4,757	171,785
Iron goods	788,775	28,303,683	65,919	2,380,407
Sheet iron			247,250	8,928,692
Zinc	34,334	1,239,870	21,680	782,908
Grits			7,604	274,596
Electrical apparatus	1,056	38,134	380	13,722
Leather goods	5,093	183,918	382	13,795

Principal foreign goods imported into Vladivostock, etc.—Continued.

Articles.	1897.		1898.	
	<i>Pods.</i>	<i>Pounds.</i>	<i>Pods.</i>	<i>Pounds.</i>
Fruit:				
Preserved			2,071	74,788
All other kinds.....	57,032	2,059,540	105,951	3,826,103
Sulphuric acid.....			641	23,148
Bricks, fireproof.....	31,018	145,098	50,459	1,822,175
Chinese manufactured goods.....			168	6,067
Cables.....	2,383	86,055	3,187	115,089
Telegraphic	266	9,606	565	20,403
Bamboo goods.....	501	1,842		
Lumber.....	454,662	16,418,754		
Oil:				
Mineral.....	1,144	43,312		
Vegetable	22,395	808,728		
Foot wear.....	7,641	275,932		
Kettles and pans.....			7,016	253,362
Butter.....			5,256	189,805
Machines, in parts.....			92,486	3,339,854
Soap.....			10,196	368,198
Manufactured goods.....			304,506	10,996,321
Cotton goods.....			240	8,667
Machines, different kinds.....	35,828	1,293,821	2,841	102,594
Nankeen.....			92,777	3,350,363
Vegetables.....	38,758	1,399,629	17,034	615,132
Firearms.....	581	20,981	70	2,528
Lead.....	1,328	47,957	1,251	45,176
Provisions, different kinds.....	4,554	164,454	7,862	283,913
Clothes	2,754	99,453	2,260	81,613
Beer.....	7,790	281,312	11,095	400,663
Wire.....			2,931	105,844
Steamship parts.....			15,600	563,347
Wheat.....	7,742	279,579	38,642	1,395,440
Goods, different kinds.....			25,887	934,831
Dry goods.....	217,800	7,865,194		
Rye.....	4,157	150,118	25,771	930,642
Rice.....	540,334	19,512,542	259,293	9,363,589
Rails.....			8,808	318,074
Glass.....	15,990	577,431	43,505	1,571,053
Saki.....	1,041	37,556	1,273	45,971
Salt.....	269,729	9,740,454	586,599	21,183,263
Lard.....	4,185	151,129	4,572	165,104
Soda.....	4,129	149,106	1,308	47,234
Candles.....	9,384	338,875	3,532	127,548
Sauce, meat.....			205	7,403
Tar.....	186	6,717	1,156	41,745
Steel.....	10,402	375,637	5,957	215,119
Corned beef.....	37,744	1,363,011	16,567	598,268
Matches.....			1,270	45,862
Axes.....	1,874	67,674	2,347	84,755
Agricultural implements.....	9,424	340,319		
Nuts.....	17,253	623,040		
Photographic apparatus and goods.....	13,791	498,021		
Pitch paper for roofing.....			12,866	464,617
Pickles.....	1,284	46,366	3,478	125,598
Seaweed			698	25,206
Coal:				
Stone.....	920,247	33,231,960	1,510,276	54,539,087
Wood.....	3,949	142,606	9,410	339,814
China ware.....	12,646	456,672	3,322	119,964
Chains, iron.....			576	20,801
Cement.....	222,125	8,021,376	344,210	12,430,112
Matting.....	1,332	48,001	1,244	44,923

Principal foreign goods imported into Vladivostock, etc.—Continued.

Articles.	1897.		1898.	
	<i>Poods.</i>	<i>Pounds.</i>	<i>Poods.</i>	<i>Pounds.</i>
Cast iron.....	2,498	90,208	2,498	90,208
Clocks and watches.....			71	2,564
Tea.....	34,065	1,230,155	57,527	2,077,415
Champagne.....			202	7,295
Silk goods.....	16,007	578,045	141	5,092
Vinegar.....	1,773	64,027	556	20,078
Enameled goods.....	704	25,423	50	1,806
Electrical appliances.....			100	3,611
Barley.....	7,572	273,440	40,731	1,470,873
Anchors.....	923	33,331	1,326	47,885
Apples.....	501	18,092	1,664	60,190
Eggs.....	1,649	59,549	15,215	549,444
Fish.....	5,132	185,327		
Flour.....	1,095,214	39,550,368		
Bottles.....	1,994	68,544		
Velocipedes.....	28	1,011		
Weights.....	1,025	37,015		
Felt.....	241	8,703		
Vermicelli.....	16,512	596,281		
Wine.....	1,699	61,354		
Screws.....	2,271	82,010		
Ropes.....	1,639	59,188		
Granite.....	41,329	1,492,473		
Pasteboard.....	1,104	39,868		
Conserves.....	977	35,281		
Copper.....	4,539	163,912		
Rugs.....	1,193	43,082		
Grains.....	2,710	97,864		
Acids.....	820	29,612		
Glue.....	1,217	43,948		
Paints.....	30,250	1,002,388		
Confectionery.....	280	10,111		
Boilers.....	20,250	731,268		
Lamps.....	1,290	46,584		
Perfumery.....	1,865	67,349		
Buckwheat.....	45,162	1,630,890		
Tobacco.....	833	30,081		
Musical instruments.....	472	17,045		
Furs, dressed.....	584	21,090		
Soup.....	14,944	540,258		
Copper goods.....	5,656	204,250		
Furniture.....	5,919	213,747		
Milk.....	2,742	99,019		
Metallic goods.....	1,876	67,846		
Sacks.....	3,058	110,530		
Beef.....	2,802	101,186		
Oats.....	6,996	252,640		

Principal Russian goods imported into Vladivostock in 1897 and 1898.

Articles.	1897.		1898.	
	<i>Poods.</i>	<i>Pounds.</i>	<i>Poods.</i>	<i>Pounds.</i>
Drug goods.....	2,026	73,163	1,926	69,551
Asphalt.....	10,609	383,112	100	3,611
Asbestos.....			6	217
Artillery.....	6,310	227,867	435	15,709
Pineapples.....			52	1,878
Paper, writing.....	2,357	85,116	6,512	235,161
Underclothes.....			1,282	46,296
Cigarette paper.....			78	2,817
Grocery goods.....	22,331	806,417	18,478	667,278
Benzine.....			35	1,264
Balsam.....			18	650
White lead.....			561	20,259
Cranberries.....	1,595	54,349	1,553	56,082
Vodka:				
Fruit.....			169	6,103
Common.....	*185,545		25,849	933,459
Preserved goods.....	834	30,118	152	5,128
Wax.....			262	9,461
Vaseline.....			68	2,455
Felt.....	1,327	47,921	988	35,678
Preserves.....	17,276	623,871	981	35,426
Car material.....			124,599	4,499,519
Velocipedes.....			26	939
Wine:				
Effervescent.....	*9,322		1,528	55,179
Still.....	*213,022		34,402	12,292,597
Mustard.....	279	10,075	442	15,961
Material for ports.....			84,502	3,051,536
Material for artillery.....			29,680	1,071,804
Household goods.....	4,109	148,384	7,968	287,740
Books.....	2,367	85,477	1,777	64,171
Cartridges.....	1,139	41,132	15,815	571,111
Coal stone.....	735,410	26,557,126		
Iron and manufactures of.....	524,207	18,930,163		
Flour.....	189,234	6,833,563		
Cognac.....			377	13,614
Oats.....			47,370	1,710,625
Rye.....	568,750	20,538,700	654,850	23,647,943
Rails.....			1,566,797	56,680,173
Rum.....	*1,207		40	1,444
Fish, salted.....	122,043	4,407,217	65,178	2,353,708
Tar.....	1,284	46,368	1,513	54,637
Candles.....	11,641	420,380	6,480	234,006
Salt.....	1,833	66,193	423	15,275
Foot-wear goods.....	4,274	154,343	4,217	152,284
Glass in sheets.....	3,696	133,470	14,422	520,805
Telegraph material.....			15,833	571,761
Tobacco goods.....	124,862	4,500,017	20,773	389,035
Tenders.....			14,520	53,085
Chemicals.....			73	2,636
Linen, coarse.....			7,204	260,151
Cotton goods.....			1,634	59,007
Hats.....			140	5,056
Extracts of all kinds.....			181	6,536
Shells.....			42,209	1,524,251
Crystal.....			138	4,983
Rails.....	280,531	10,120,535		
Kerosene.....	71,464	2,580,708		
Woodwork.....	13,576	490,257		

* Bottles.

Principal Russian goods imported into Vladivostock, etc.—Continued.

Articles.	1897.		1898.	
	<i>Poods.</i>	<i>Pounds.</i>	<i>Poods.</i>	<i>Pounds.</i>
Agricultural implements.....	344	12,423		
Confectionery	19,838	716,390		
Buckwheat	27,498	933,008		
Leather goods.....	38,836	319,086		
Bricks	13,407	484,153		
Kettles	13,716	495,312		
Oil:				
Cocoanut	956	34,523		
Castor	87	3,141		
Wood.....	2,123	76,666		
Mineral.....	5,733	207,030		
Raisins, stoneless.....	164	5,922		
Varnishes.....	1,356	48,968		
Hospital goods.....	1,609	58,104		
Manufactured goods.....	74,502	2,690,416		
Oil, metallic.....	20,225	730,365		
Macaroni.....	4,245	153,295		
Machines, in parts.....	43,910	1,585,678		
Soaps.....	19,055	688,114		
Copper goods.....	1,933	69,704		
Furniture.....	1,594	57,563		
Bridges, in parts.....	12,935	467,108		
Beer	33,007	1,191,949		
Wheat	3,471	125,345		
Sugar, ground.....	692	24,990		
Wires.....	44,833	1,619,009		
Clothes.....	6,289	227,108		
Perfumery.....	227	8,197		
Railroad ties.....	29,062	1,049,487		
Gloves.....	17	614		
Fish, smoked.....	1,362	49,185		
Rubber goods.....	591	21,342		
Spirit	47,401	1,711,745		
Sugar.....	190,078	6,864,097		
Matches	4,492	162,215		
Seeds.....	84	3,033		
Broadcloth	19,790	714,656		
Lead.....	2,651	95,733		
Grindstones	1,424	51,423		
Axes	1,915	69,154		
Wagons	2,850	102,919		
Essence, vinegar.....	400	14,445		
Chains.....	13,233	477,870		
Zinc	3,195	115,378		
Cement	1,943	70,166		
Carriages	11,088	400,410		
Electrical appliances.....	1,128	40,734		
Barley	1,000	36,112		
Anchors	4,923	177,779		

Number of vessels arrived in Vladivostock in the season of 1898.

Flag.	No.	Tonnage.	Countries of import.		For use of the Government.	Goods in transit.	For Eastern Chinese Railroad.	Coal.	Total.
			European.	Chinese and Japanese.					
			Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russian	27	22,084	2,516.67	3,980.38	.....	196.69	170.14	457.5	7,321.88
German	88	76,494	28,495.54	21,264.97	45	122.15	2,519.63	18,449	770,896.29
Norwegian	46	46,833	12,564.18	1,124.55	5,112.85	.....	11,641.85	11,757	42,200.49
Japanese	38	59,752	3,205.47	10,549.75	66	.....	1,037.59	325	15,243.81
English	37	55,569	20,373.80	1,703.34	2,024.77	.....	33,204.35	950	58,340.26
American	4	3,301	4,064.97	.....	.....	.....	.....	.....	4,064.97
Chinese	1	826	256.2	.....	.....	.....	.....	.....	256.2
Danish	5	3,410	.....	847.19	.....	.....	.....	.....	347.19
Total	246	259,260	71,506.83	39,470.68	7,248.62	318.84	48,663.56	31,038.5	199,147.03
<i>Vessels of the volunteer fleet and those chartered by them in 1898.</i>									
Russian	31	74,081	18,542.35	2,707.13	36,701.18	5,221.76	.....	500	63,672.42
French	2	5,784	741.63	20	804.84	398	.....	.....	1,964.47
English	1	1,798	1,578.22	213.2	52.5	963.76	.....	.....	2,307.68
German	6	3,780	.....	.....	.....	.....	.....	1,823	1,823
Total	40	85,443	20,862.2	2,940.33	37,558.52	6,583.52	.....	2,232	70,267.57
Grand total	286	344,703	92,369.03	42,411.01	44,807.14	6,902.36	48,663.56	34,261.5	269,414.6

The amount of freight exported from Vladivostock by private steamers in 1898 was 26,240 tons, of which 21,930 tons were for European ports. The volunteer fleet carried 5,022 tons of exports.

The following statement shows the ports to which freight was sent from Vladivostock, in the season of 1898, by the volunteer fleet and private steamers:

Ports.	European products.	Chinese products.	Government stores.	Commissary stores.	Total.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Nagasaki	123.72	186.56			310.38
Posiet	47.78		226.33		274.11
Chemulpo.	.06				.06
Alexandrovsk	2,716.41		225.07		2,941.48
Korsakovsk	642.53	34.47	31.85		708.85
St. Olga	33.96	2			35.96
Nikoliefsk	11,548.83	284.78			11,833.61
Saghlien	5.38	22.48			27.86
Dekastri	1.1				1.1
Imperial Havan	16.68				16.68
Port Arthur	6,199.66	160.26	2,997.26	1,778.29	11,135.47
Chefoo	2.35	67.87			70.22
Gensan	1	114.05			115.05
Fusan		30.14			30.14
Shanghai	.7	76.22			76.92
Hongkong	58.41	171.4			229.81
Kobé	67.58	7.78			75.36
Dooa	67.37				67.37
Mgachee	149.48				149.48
Petropavlofsk	165.76				165.76
Anadeer	214.89				214.89
Ports in the Sea of Okhotsk	1,052.08		275		1,327.08
Hankau	5.85				5.85
Odessa	790.42		133.08		923.5
St. Petersburg	151		375.5		526.5
Total	24,063	1,158.01	4,264.09	1,778.29	31,263.39

NOTE.—In this total is included also 5,223.54 tons of freight for the Eastern Chinese Railroad and 318.84 tons of freight in transit.

General summary.

	<i>Tons.</i>
Total imports	262,512.24
Total imports in transit	6,902.36
Total exports	30,944.55
Total exports in transit	6,523.84
Total	306,882.99

Mr. Greener adds:

The tariff rates on goods imported into the Maritime, Amoor, and Trans-Baikal provinces are:

Articles.	Tariff rate.	
Tobacco:		
In leaf, in bundles, with and without stems, and tobacco stems, by the pood (36.112 pounds).....	<i>Rubles.</i> 15.40	\$11.895
Cut smoking tobacco and snuff in all kinds of shapes, by the pound.....	1.30	1.005
Cigars, cut, wrapped in tobacco leaves, cigarettes, by the pound.....	3.20	2.475
Sugar:		
Raw sugar, crushed or ground, without large pieces, mixed, by the pood.....	3.00	2.325
Refined sugar in large and small pieces, by the pood.....	4.00	3.87
Confectionery (candies, preserves, and berry sirups, pastiles, jellies, fruit powders, with sugar, fruits in liquors of rum, cognac, with sugar, by the pood, including package).....	9.60	7.41
Arrack, rum, vodka, French cognac, cherry, and other bread spirits and wine:		
Imported in large and small barrels, including package, by the pood.....	12.00	9.27
Imported in bottles and in all sorts of packings, liquors, infusions, by the bottle (one-twentieth of a gallon).....	1.00	.7725
Wine, grape and berry:		
Imported in large or small barrels, containing less than 16 grams of alcohol, by the pood, including package.....	4.00	3.87
Noneffervescent, imported in bottles (one-twentieth of a gallon).....	.45	.345
All kinds of effervescents, in bottles.....	1.40	1.08
All kinds of porter, beer, and cider:		
Imported in small and large barrels, by the pood, package included.....	1.50	1.155
In bottles.....	.20	.1545
Extracts of fruit and berries (all kinds, including package).....	.75	.579
Fluid products:		
Naphtha, coal oil, oils, etc., by the pood.....	1.00	.7725
Varnishes of spirits and oils, tar in oil, by the pood.....	10.00	7.725
Matches, chemical combustibles of all kinds, by the pood.....	2.20	1.695

NOTE.—Russian import duties are payable at the old gold-ruble (77.2 cents) rate in its equivalent in the new gold ruble (51.5 cents).

Catalogues may be sent direct to this agency. They will be kept for inspection or distributed judiciously. In all cases prices, lowest rates, discounts, and commissions should be clearly stated. The American dollar on exchange generally equals 1.94 to 1.95 rubles. In ordinary business matters, \$1 equals 2 rubles.

An agent speaking German or French, if not Russian, is worth a thousand circulars. American goods of first quality win their own way. There are now here cheap goods of every nationality—German, French, Chinese, and Japanese—sufficient to glut the market. Superior goods bearing an American mark would find a ready sale among the better classes.

Vladivostock, although an open port, is also a fortress, and, while there is capital already invested and a steady increase in the volume of trade, progress is slow.

RAILROAD BUSINESS IN RUSSIA IN 1898.

The mileage of Russian railroads was considerably increased during the year 1898. Of the newly constructed roads, the principal are on the Trans-Siberian line section from Obi to Krasnoyarsk, 471 miles; and from Taiga to Tomsk, 59 miles. Regular trains have been placed on the line from Vologda to Archangel, 394 miles. The following lines have been opened, viz: The Moscow-Jaroslav-Archangel, the Riazan-Ural and Moscow-Windau-Rybinsk, in the Moscow region; Lugansk-Millerovo, in the region of the Donetz basin; and Lukov-Lublin, in the Vistula region. The Russian railroads, on January 1, 1899, consisted of twenty-eight connecting lines, of which eighteen are controlled by the Government and ten by private companies, viz:

	Miles.
Baltic and Pskov-Riga.....	618
Catherininsk	649
Kursk-Kharkov-Sevastopol	982
Libau-Romny.....	826
Moscow-Brest	684
Moscow-Kursk-Nizhni Novgorod.....	701
Nikolaevsk	604
Perm-Tiumen	823
Poliessk.....	953
Vistula.....	820
Riga-Orel	785
Samara-Zlatoust	987
St. Petersburg-Warsaw	882
Western Siberian.....	882
Central Siberian	535
Syzran-Viazma	865
Kharkov-Nikolaev	791
Southwestern.....	2, 433
Warsaw-Vienna.....	307
Vladi-Caucasian	905
Ivangorod-Dombrovsk	300
Lodz	17
Moscow-Windau-Rybinsk	545
Moscow-Kazan.....	803
Moscow-Voronezh.....	1, 030
Moscow-Jaroslav-Archangel	1, 071
Riazan-Ural	1, 797
Southeastern	2, 288

The lines not connected with the general system are:

	Miles.
Baskuchank	48
Transcaucasian.....	694
Transcaspian.....	938

The local roads are:

	Miles.
Irinovsk.....	36
First Society of Railroads.....	217
Sestroretsk	23
Tsarskoe-Selo.....	17

The total length of the Russian railway lines (with the exception of the Finland railroads, 1,590 miles long, which are controlled by their own directors, officers, and statutes) is 26,797 miles. This summary of the railroads in operation does not give a full idea of the extent of Russian railroad mileage at the beginning of the present year, as a number of lines are in course of construction, which, when completed, will furnish a total of 7,015 miles. On many of the roads under construction, temporary communication was opened last year, and others will be opened in the near future.

The most important line under construction is the Poltava-Kief, which will furnish an outlet for the products coming from a rich and densely populated region to Kief and farther west. The Poltava government is in the rich black-earth belt, the principal occupation of its inhabitants being agriculture. This, it is estimated, will furnish 219,355 tons of freight annually.

It is thought that the projected line from Nizhni Novgorod south will carry 129,032 tons the first year, and that its business will increase rapidly.

It is proposed to construct a line from Zemetchina on the Syzran-Viazma Railroad to Kustarevka, to furnish an outlet to an area of 1,445 square miles, with a population of 112,000.

A line will be built from St. Petersburg southward to Kief, which will shorten the route 166 miles.

Measures will be taken to increase the capacity of the Novorossisk branch of the Vladi-Caucasian Railroad by constructing a new line from the Caucasian station to Ekaterinodar, and by laying down a second track from Ekaterinodar to Novorossisk, which is the terminal point for goods exported by the Vladi-Caucasian Railroad. The movement of freight on this line in 1895 amounted to 601,613 tons of grain and 64,355 tons of miscellaneous freight. Now that the Tohoretsk-Tsaritsine line is completed, cargo from the Volga will move on the Novorossisk branch.

In addition to the foregoing, several roads will be constructed by the Government, viz: From Vladivostock to Kerch, which will run through a rich mining district; the Volchansk-Kupiansk line, 73 miles, a local road affording an outlet to an area of 1,288 square miles, with a population of 136,000; the Piatihotka-Koristovka line, which will connect the Catherininsk and Kharkov-Nikolaev railroads and will be also of local importance.

A line will be built from Chiatury to Darkveti, four miles long. In order to develop the manganese industry of Transcaucasus, the so-called Chiatury branch of the Transcaucasian Railroad was constructed in 1891, which carried 80,645 tons of manganese during the first year and a total of 193,549 in 1896, showing the development of the manganese industry in that region. But this branch does not meet the requirements, as the mines extend beyond Chiatury, and the line will be extended.

Concessions have been granted to private corporations to build the following lines: From Yalta to Bahchisarai, 45 miles; from Novozubkovo to Novgorod-Seversk, 76 miles; from Belgorod to Sumy, 96 miles; from Holm to Belzshetsk, with a branch from Zamostie to Lublin, 119 miles; from Valk to Marienburg, with branches, 129 miles; and three small lines in the manganese region in the Transcaucasus, 26 miles.

The past year was the tenth of the existence of the new tariff regulations, published March 8-20, 1889, reducing the passenger rates. The general passenger tariff, introduced at the end of 1894, lowered the prices for distances exceeding 106 miles; for shorter distances for third-class passengers the tariff remained unchanged. Later, suburban rates were adopted for distances of less than 106 miles, calculated at 1 copeck per mile per third-class passenger. The results of the general lowering of the tariff and the application of the suburban rates proved satisfactory; the number of passengers increased to such an extent that the railroads lost nothing. In view of these favorable conditions, the tariff committee has decided to reduce the rates of all passenger tickets to correspond with those charged on the suburban lines.

The passenger department is working on a new rate sheet, which will be published at an early date. A further reduction has been made to emigrants, who have been carried at a reduced rate when traveling together, one ticket being issued to the whole party, which caused great inconvenience to the emigrants and railroad officials. Hereafter, each emigrant will be furnished with a ticket at one-fourth of the ordinary rate. A new tariff has been worked out for direct communication with the ports of the Far East, and this decides an important question concerning Russian commercial relations with distant ports. With the introduction of the new tariff, it becomes possible to transport goods to the ports of the Far East from every railroad station of the interior of Russia. A new tariff for transporting Egyptian cotton to Lodz has been made out in connection with the Austrian railroads. Egyptian cotton was formerly billed to the Lodz district through Odessa, and the Russian steamship companies and Russian railroads profited by this traffic. The

Austrians coveted this freight, and their railroads made a secret agreement with the steamship companies, reducing their tariff, and Egyptian cotton began to move through Trieste to Lodz. Under such conditions, Russian steamers and Russian railroads lost business; and as the Austrian railroads could do the same thing with other goods coming to Russia from the ports of Asia Minor, the Russian Government increased the tariff on cotton on the Warsaw-Vienna Railroad, and lowered the rate on the Russian steamship company and the tariff on the Odessa-Lodz Railroad. These measures had the desired results—Austrian railroads came to terms with the Russian roads, and a tariff was established satisfactory to both countries. During the past year, an agreement was made with foreign railroads concerning tariffs for kerosene and grain cargo coming from stations of the Russian railroads direct to the interior stations of German and Netherlands roads. The interior tariff on sugar and salt and the general cargo tariff have also been reviewed this year. It is proposed to establish one general tariff for all the interior railroads, but this will not be done until next year. Owing to the failure of crops this year in some of the governments, a special tariff was established for the transportation of seed grain and cattle to the famished districts.

Last year, a project for reorganizing the Ministry of Ways and Communications was presented to the Government for consideration, and is nearing its solution.

ST. PETERSBURG, *April 20, 1899.*

W. R. HOLLOWAY,
Consul-General.

HEAVIER RAILS FOR SIBERIAN RAILWAY.

A St. Petersburg dispatch to the London Times, under date of March 29, regarding the progress of the great Siberian Railway, may be of interest to the steel-rail manufacturers in the United States. It announces that the imperial exchequer will open a further credit of 82,770,660 rubles (\$42,626,889) for improving the lines of traffic and transport of the western and central sections of the railroad. The disbursement of this large sum is divided so that 8,750,000 rubles shall be used during three years for various needs of traffic, 43,000,000 rubles during nine years for increasing the speed of trains, and 31,000,000 rubles during four years for new rails, making the aggregate amount allotted for this purpose in the current year 16,500,000 rubles (\$8,497,500). This large sum is in addition to 30,500,000 rubles (\$15,707,500) for the Siberian Railroad and 71,000,-

ooo rubles (\$36,565,000) for other lines in this year's estimates. The last paragraph of the dispatch reads as follows:

The increase of the traffic on the eastern and still more on the western section of the Siberian Railway has surpassed all expectation. Its construction was originally planned on economical lines, but the pessimist forecasts of little or no movement for some years to come are being falsified by the facts. Consequently, the light rails, which are only 18 pounds, instead of 24 pounds, to the foot, will have to be changed. Everything was calculated for not more than three pairs of trains per twenty-four hours, whereas there are already eight pairs, besides the biweekly express from Moscow to Krasnovodsk. The last year's traffic returns of the western Siberian section show 350,000 passengers, nearly 490,000 tons of goods, and 400,000 peasant emigrants. Last winter, although 600 new trucks were added and 1,600 old ones borrowed, there was an accumulation of 7,000 truck loads of goods for which no means of transport could be found. Of the 490,000 tons carried over the railway in 1898, more than 320,000 tons consisted of cereals. In the course of the next five years, it is expected that the carriage of wheat here will reach over 800,000 tons per annum. In the Altai mining district alone at the present moment there is a surplus of 355,000 tons of wheat, while in central Russia whole populations are suffering from actual famine.

MARSHAL HALSTEAD,

BIRMINGHAM, *April 5, 1899.*

Consul.

TRAFFIC ON SIBERIAN RAILWAY.

Consul-General Holloway sends from St. Petersburg, April 7, 1899, an extract from a Russian paper, giving the following figures of traffic in the last three years:

Year.	Passengers.		Goods.	
	Western section.	Central section.	Western section.	Central section.
			<i>Pounds.</i>	<i>Pounds.</i>
1896.....	160,000	15,000	379,176,000	36,581,000
1897.....	236,000	177,000	765,213,000	194,752,000
1898.....	350,000	300,000	1,083,360,000	393,232,000

The article continues:

These figures do not include 400,000 emigrants with their goods and chattels carried by the western section.

Of the 490,000 tons carried by the western section in 1898, 320,000 tons represent cereals. The steppe regions bordering on the western section five years ago required 100,000 tons of grain per annum; now, they are able to export 70,000 tons. With the opening of the through traffic to the Pacific, the extension of the road as a carrying agent must be enormous. It is calculated that five years hence, the Trans-Siberian Railway will have a goods traffic of 1,700,000 tons per annum.

It is proposed to spend over \$40,000,000 in developing traffic during the next

few years. Heavier rails and side tracks are to be laid,* and 1,429 bridges reconstructed. The average speed of trains is now 20 versts (13.26 miles) an hour for passenger, and 12 versts (7.956 miles) an hour for goods traffic. When the reorganization is complete, it will be possible to run trains at 50 versts (33.15 miles) an hour, which would enable them to travel from Moscow to Vladivostock in ten days. The distance separating the Atlantic from the Pacific could then be traveled in considerably less than a fortnight.

THE FAIR OF NIZHNI NOVGOROD.†

Nizhni Novgorod is situated on a high cliff, at the confluence of the Volga and Oka rivers. The present population of the city is about 95,000. The lower part was inhabited by a colony of Tartars in 1222. The distance from Moscow by rail is 227 miles; it can also be reached by steamer from Resan by the River Oka, and from the Caspian Sea by the Volga. A fleet of about four hundred and fifty steamers, besides a large number of tugs and towboats, ply on the river. The Volga is some 1,250 miles in length.

The fair opens on the 27th of July, but business proper commences about the 12th of August and lasts until the 6th of September. It is attended by nearly half a million people from both European and oriental Russia, and the amount of business generally transacted is estimated at about \$35,000,000.

The fair is held in and around a place called the Bazaar, composed of about sixty streets, on which are only stores and warehouses. The following goods are sold: Cottons, prints, carpets, cloths, linen, flannels, silks, lace, bags of jute and hemp, leather, skins, chamois, furs, paper, copper, cast iron, enameled ware, cutlery, agricultural implements, implements for mechanical and other industries, seeds for farmers, oats, corn, wines, spirits, paints, varnish, lime, cement, etc.—all of which are chiefly of Russian origin. Sheet iron, boiler plates, copper, precious stones, and a variety of geological specimens from Siberia are also exhibited, as well as cotton in a raw state from Central Asia and Persia, and turquoises, silks, and silverware, made in oriental style, from Persia, Bokhara, Taschent, etc.

The fair is well managed, the governor of Nizhni staying there during the time it is open. He has a military staff, and the discipline is very strict. The merchants have their own committee, before which everything concerning trade is laid. On the fair grounds, there are hotels, churches, dining saloons, theaters, and Tartar and Chinese

* See p. 449, *ante*.

† The above report was obtained in answer to inquiries by a resident of Indiana, to whom Advance Sheets have been sent.

quarters. There is good sewerage and waterworks, and the place is surrounded by a canal of water as a protection against fire. There is very little trade done in goods imported from abroad. The fair, for the last few years, has been losing its prestige on account of the number of railways that have been built in European Russia and central Asia, and the great Siberian line, which is more than half finished. The passenger tariff has also been reduced to one-third of what it was formerly, so that merchants can now come to central towns, where everything is manufactured and kept in large stocks all the year round, to get what they require; thus, the fair is now visited mostly by Russian and Asiatic tribes. Large cities and towns in central Russia keep stocks of foreign goods, which are bought partly abroad and partly at the fair.

Some three months before the commencement of the fair, notices are inserted in the papers stating the stores that are to be let, giving all particulars and where to apply. The rents of the stores range from \$100 to \$1,450; but, in addition to this, there are taxes for the police, city, and other purposes, which amount to about 5 per cent on the rent.

It must be understood that the word "fair" does not signify an exhibition, but a large market where goods are exposed for sale and yearly contracts concluded.

THOMAS SMITH,
Consul.

Moscow, *April 13, 1899.*

PIG IRON AND COPPER IN THE URALS.

Consul-General Holloway, of St. Petersburg, on April 18, 1899, transmits the following translation of an article in the Commercial Gazette:

The statistics concerning the production of pig iron in the Urals during 1898 and the estimates for the first half of 1899 have just been published. In 1898, 690,161 tons of pig iron were smelted—32,258 tons more than in 1897—and one hundred and fifteen high furnaces in sixty-nine factories were in action. For the years 1894 and 1898, the comparative data were as follows:

Description	1894.	1898.
High furnaces.....number...	113	115
Quantity smelted.....tons...	536,616	690,161
Average productiveness per high furnace.....do.....	4,726	6,000
Average amount produced per day.....do.....	13	16

There is no doubt that the metallurgical industry of the Urals continues to develop, notwithstanding such unfavorable conditions as the lack of railroads and

mineral fuel. The productiveness of the factories, as seen above, has increased during the last five years 29 per cent; the technical part—that is, the productiveness of the work of the high furnaces—has increased 26 per cent, and the amount daily smelted by each furnace 25 per cent.

During the first half of the present year, it is estimated that 380,645 tons of pig iron will be smelted. Taking into consideration the fact that six new high furnaces are being constructed in the Urals, and six are being remodeled for a larger production, it is probable that during the second half of 1899, there will be a production of pig iron which will make the output for the whole year amount to 775,000 to 790,000 tons.

The beginning of the year was very animated in the Urals. The demands for mines, especially of iron, manganese, and chrome, were exceedingly large. Agents arrived from southern Russia, principally from Novorossisk. The Urals have been visited by different capitalists, who wish to organize new metallurgical enterprises. There are three principal reasons why the Urals are at present attracting universal attention: (1) The projected railroad from Cheliabinsk to Tsaritsine; (2) the hope that southern Ural ore will be demanded by the Donetz basin; and (3) the expectation that Siberian coke will be brought to the Urals, which will cause the development of the metallurgical industry there, as the southern region possesses inexhaustible mines of ore, the working of which will not cost more than 62 cents per ton. The richness of the magnetic iron ores is such that there are mines where it is impossible to drive in sleighs, as the iron slides, under the influence of the magnet, stick to the ground.

Latterly, the demands for copper mines have increased, owing to the rise of prices of copper. This is unexpected, as but five years ago, copper-smelting factories gave up their mines to the Government. The copper industry has declined in the Urals; but should copper speculations continue abroad, the revival of the industry in Russia may be expected. In some of the factories in Tagill, a ton of copper is sold at \$480.50, whereas two years ago it was sold at \$298 to \$372 per ton. Chemical factories in the district of Elabuga have great demands for copper, and new mines in the government of Viatka have been discovered. This government was formerly one of the first in the smelting of copper, but now only the peasants, when they are free from other work, extract the ore and take it to Kukmor and other villages, where it is smelted in ordinary smithies and made into cheap articles. However, there are two or three workshops which make larger articles and even samovars.

SULPHATE OF COPPER IN FRANCE.

The approach of the wine-making season has caused the agriculturists in this part of France to unite in a movement for the repeal of the tariff on sulphate of copper, which is extensively used to protect the grapevines against black rot and mildew. In periods of heavy rains, the vines sometimes require five treatments, at an aggregate expense of from \$2 to \$2.50 per acre. The use of copper has increased, and is expected to further raise the cost of the sulphate; hence, the movement for a reduction of the duty.

As the United States is the largest copper-producing country in the world, a résumé of what is said on this subject in France will

not be without interest. The imports of the sulphate into France were:

	Tons.
1895.....	24, 641
1896.....	34, 539
1897.....	30, 909
1898.....	31, 468

The metal base enters into the composition of the sulphate in the proportion of 26 per cent, the price of the sulphate being entirely governed by the price of copper.

When the proposition was made to remove the tariff of 3 francs (57 cents) per 220 pounds from copper, it was stated that an American syndicate had cornered the market and that the corner must soon break, with a resulting fall in prices. Wine growers, influenced by this report, refrained from laying in a supply of sulphate, and as the demand for that article ceased, manufacturers stopped producing. A legislative commission appointed to investigate the subject reported the advance in price to be a legitimate result of the workings of the law of supply and demand, to wit, the new and increased uses of copper in machinery, the extension of telegraphs, telephones, electric lighting and electric tramways, and especially the building of the Metropolitan Trolley Railroad in Paris, which will consume 5,000 tons of copper. The opinion was expressed by the commission that the demand for consumption will continue in excess of production; that Japan and Spain can not increase their output; that Chile can increase hers; but that the possibility of equalizing the two factors—supply and demand—must depend upon the copper producers of the United States.

The consumption in France amounts, annually, to 60,000 tons—47,000 tons in block, bars, and plates; 8,000 tons of old metal, all imported; and 5,000 to 6,000 tons of old copper picked up at home.

The committee of the Lower House of Parliament reported adversely to a reduction of the customs duty. It declared that France was powerless to lower the price of copper, as it does not produce that metal. It is believed here that much of the copper that enters France from England is the production of the United States. It is entered as English goods, so as to escape the extra warehouse tax levied upon merchandise that is transshipped from the country of its origin to France. It was stated in the report of the commission that if the duty were abolished, English dealers would at once raise the price of copper.

The customs tariff on copper yields a revenue of 90,000 francs (\$17,370) per year.

JOHN C. COVERT,
Consul.

LYONS, *April 5, 1899.*

AUTOMOBILES IN PARIS.

On Easter Sunday (April 2, 1899) the first installment of automobile cabs was placed at the disposal of the Parisian public. As soon as they issued from the depot at Aubervilliers, they were eagerly sought after, and gave most satisfactory results. The number of these vehicles is daily being increased, and the Compagnie Générale des Voitures expects, after a month's trial, to be in a position to judge of the convenience or drawbacks of the present type of cabs. Impressions of the wood cuts of the two types at present in use I inclose herewith. These vehicles are provided with accumulators enabling them to travel from 60 to 80 kilometers (37 to 49 miles) without recharging the batteries.

The tariff varies according to the number of persons. For one or two passengers, the ordinary cab fare is applied, viz, 1.50 or 2 francs (28.9 or 38.6 cents) per hour; for three persons, 2 francs the journey; and four persons, 2.50 francs (48.2 cents). Between 12.30 and 6 a. m. the rate is 2.25 or 2.50 francs (43.4 or 48.2 cents) the journey, and 2.50 to 2.75 francs (48.2 to 52.8 cents) per hour, according to the number of passengers. Fares beyond the fortifications will be 25 centimes (4.82 cents) above the existing rate for ordinary cabs.

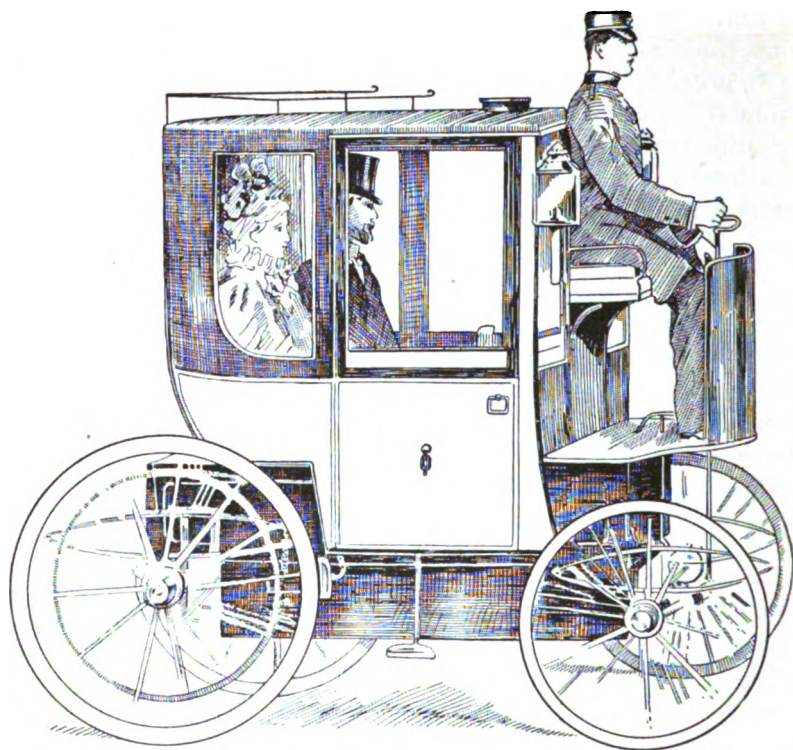
The eventual adoption of automobiles for general use in Paris, as well as throughout France, seems to be a foregone conclusion; but there is no doubt that the tremendous speed at which private individuals with their motor tricycles and other experimental automobiles dash about the streets has had a tendency to discourage the adoption of automobiles by those who would otherwise make purchases.

By daily observation in Paris, it is easy to see that improvements are constantly being made in doing away with the objectionable odors, excessive vibration, and noise.

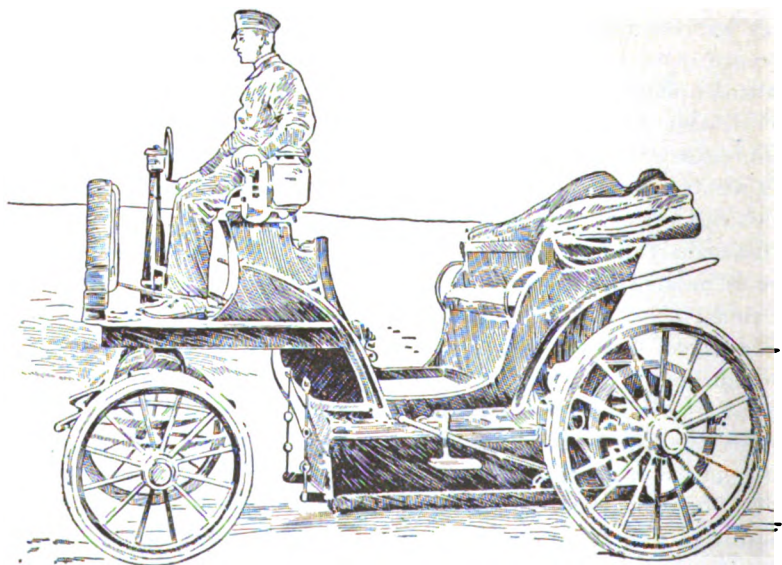
The action of the Compagnie Générale des Voitures in establishing the speed of its automobiles in the city at about 8 kilometers (5 miles) an hour* will diminish, if not avoid, the crushing of pedestrians and serious accidents. The element of fear being eliminated, the introduction of reliable, and not too complicated, mechanism will certainly produce a new era in locomotion throughout France.

I may state that an important and appreciated merit in the new automobile cabs is the brake placed in the interior of the vehicle,

*See CONSULAR REPORTS NO. 225 (June, 1899), p. 251.



ELECTRIC BROUGHAM.



ELECTRIC VICTORIA.

by which the passenger can not only check the speed, but bring the conveyance to a standstill independently of the conductor.

In order to have the trial complete and obtain the consensus of public opinion, registers are placed at each cab stand for such observations as individuals may see fit to make.

It is the intention of the company to daily increase the supply of vehicles, as may be justified by the demands of the public.

JOHN K. GOWDY,
Consul-General.

PARIS, *April 7, 1899.*

SLAUGHTERHOUSES IN PARIS.*

There are in the city of Paris three slaughterhouses, viz, Villette, Grenelle, and Villejuif. During the year 1896, there were slaughtered 300,243 head of cattle, of which 295,438 were of French origin and 4,805 foreign. This total is an increase of 1,633 head over the year 1895, but as the cattle of 1895 weighed on the average more than those of 1896, the amount in weight has not materially increased.

As regards the slaughter per month of that year (1896), it varies from 21,898 head in April to 28,697 head in November, the average for the year being about 25,000 to 26,000 head per month.

The sale of beef has not increased, which is accounted for by the marked increase in the production, since two years, of pork and its products, and the low price. This last-named meat being comparatively rare in 1894, it was to the advantage of farmers and stock raisers to produce it and reap the proportionate benefits. The increase of the production of beef is the direct result of the low price of animal food in 1895.

As to French cattle, the breed known as "Cholet" (Rayon d'Or) supplied for 1896 74,841 head; Normandy, 62,629; White (Berri-chons, Charolais, and Nivernais), 40,496; Algerian, 453—out of the total of 295,438 head.

The importation of foreign animals in 1896 shows a slight increase as regards cattle and calves over the year 1895, but a decrease as to sheep and hogs. The price for cattle in 1896 was low and obtained with difficulty. Out of the 4,805 head of cattle received from abroad, America furnished 4,289 head; Spain, 217; Portugal, 299; being for America an increase over 1895 of 2,354 head and a decrease for Spain and Portugal of 141 and 1,080 head, respectively.

In 1896, 300,093 head of cattle left the stock market in Paris. Of this total, 190,581 went to the three slaughterhouses of Paris, 459 head for delivery in the city, and 109,053 for exterior delivery.

* This report was submitted in answer to inquiries by an Illinois correspondent, to whom Advance Sheets have been sent.

A large number of the animals sold at the Villette market are not for Parisian consumption, as nearly a third is bought by provincial butchers residing within a radius of 60 miles of Paris and the wholesale dealers of the large towns to the north and east of Paris. The following figures will show as near as possible the percentage of meat weight after slaughtering and dressing the animal:

Description.	Per cent.	Kilograms.	Pounds.
Large-size animals:			
1,100 kilograms (2,425 pounds).....	65	715	1,576
1,000 kilograms (2,205 pounds).....	63	630	1,389
900 kilograms (1,984 pounds).....	60	540	1,190
Medium animals:			
750 kilograms (1,653 pounds).....	58	435	959
700 kilograms (1,543 pounds).....	58	406	895
650 kilograms (1,433 pounds).....	55	358	789
Small animals:			
400 kilograms (882 pounds).....	54	216	476
375 kilograms (863 pounds).....	52	195	430
350 kilograms (772 pounds).....	50	175	386

The prices for this meat run, on the average, during the year from 1.14 to 1.41 francs (22 to 27 cents) per kilogram (2.2046 pounds). Foreign cattle coming into France pay 10 francs (\$1.93) the 100 kilograms (220 pounds), live weight, to the city of Paris and an octroi or customs duty of 53 francs (\$10.23) per head for beef or bulls and 35 francs (\$6.75) for cows.

The animals are disinfected at the cattle markets twice a week, after each sale day, which service has been in operation since 1888 and is performed by seventy employees. The disinfectant used is of antiseptic products in accordance with prescription, and made under the control of the official sanitary service. The sale of the animals is conducted by an officially authorized corps of one hundred and twelve commission men, who receive from 3 to 5 francs (57.9 to 96.5 cents) per head commission.

A municipal charge of 3 francs per head is made for the space on the day of sale in the market, 50 centimes (10 cents) per head per day for stabling, and a charge of 25 centimes (5 cents) per head for disinfection.

The charge of 3 francs per head produced in 1896 a revenue of 900,729 francs (\$173,840.69); stabling, 124,840 francs (\$24,094); disinfection, 75,060 francs (\$14,487).

For the year 1896, of the 213,679 head slaughtered, the average meat product was 347 kilograms (765 pounds) per head, or a total supply of 74,136,429 kilograms (163,441,171 pounds), selling on an average per kilogram (2.2046 pounds) for the year at 1.66 francs (32 cents).

As to the different uses to which the other parts of the animal are applied, the prices vary somewhat, but on an average can be given as follows:

Hides, 60 to 70 francs (\$11.58 to \$13.51) per 100 kilograms (220 pounds). These go to the tanner. The hair sells for from 8 to 10 francs (\$1.54 to \$1.93) per 100 kilograms. This is largely used for making gun cartridges, fertilizer, and also enters in the fabrication of a sort of tissue, half vegetable, called "thibaude." The bones sell for 6 francs (\$1.15) per 100 kilograms, and are used by the manufacturers of glue, fertilizers, and chemical products. The horns bring about 30 francs (\$5.79) per 100 kilograms and are principally used for the manufacture of knife handles, etc. The hoofs sell at 8 to 9 francs (\$1.54 to \$1.73) per 100 kilograms and are used by fertilizer manufacturers. The grease, amounting in value to about 25 to 30 francs (\$4.82 to \$5.79) per 100 kilograms, is used by soap manufacturers.

JOHN K. GOWDY,
Consul-General.

PARIS, *April 7, 1899.*

ECONOMIC CONDITIONS IN FRANCE.

The budget commission of the French Chamber of Deputies has recently presented to that body a paper on the subject of foreign and domestic commerce, which is expected to exert no little influence upon economic legislation.

The commission is composed of thirty-two members—M. Mesureur, president—and among them are some of the ablest statesmen of France.

I translate below extracts from this report:

The commercial appropriation bill will demand the attention of the Chamber on account of the need of organization and development, the direct result of international economic evolution. We are no longer in the primitive periods when nations worked out their destinies in glorious tournaments or in mysterious diplomacy. To withdraw ourselves from the conditions of existence which are created for us, not only by our neighbors, but by the peoples most distant from us, would be a chimera. The influence of military power seems to be limited in its future action to the settlement of questions of territorial expansion. The excess of production, the life and the future of armies of workingmen, the necessity of conforming to the new conditions which spring up daily through the progress of science, the substitution of new fields of activity, and the indispensable reconciliation of conflicting national interests form the unbeaten field in which the struggles of modern life must be carried on.

Agriculture itself, the most primitive expression of human activity, is already inseparable from mechanical and industrial questions, from the sympathetic influence of commerce and credit, from the action of foreign production and foreign

tariffs. With men who have the highest feeling of public interest, the conflict between commerce and agriculture is only apparent. A solution which will at once satisfy the ends of justice and conduce to the mutual welfare of these two sister branches of national labor is not beyond the range of possibilities; but this solution is as difficult to discern as to accept. It demands patient and persevering research, constant observation, and statistics and information from all parts of the world. These are necessary to guide us in our efforts, and to prevent irreparable errors on the part of the legislative or executive authorities.

The complexity of this work is such as to attract earnest attention; the Bureau of Commerce, which is its instrument, is destined to be of the highest importance, and should be in charge of persons who yield in nothing to the personnel of the most distinguished departments of our Government. The Minister of Commerce is also invested with the duty of studying the general organization of labor, its conditions and risks; he aids in the professional education of the largest possible number of young Frenchmen; he subsidizes and directs cooperative societies of credit and labor.

Let us make a brief review, by means of the statistical documents furnished to the Bureau of Commerce by the Labor Bureau and the customs authorities, of the general situation of our commerce, industry, and navigation. According to the statistics of 1897, our importations and exportations for that year were: General commerce, 9,940,000,000 francs (\$1,918,420,000), against 9,522,000,000 francs (\$1,837,746,000) in 1896—an increase of 418,000,000 francs (\$80,674,000) over the preceding year. The movements in special commerce were 7,554,000,000 francs (\$1,457,922,000), against 7,199,000,000 francs (\$1,389,407,000) in 1896—an increase of 355,000,000 francs (\$68,555,000).

The value of importations in the general commerce of 1897 reached 5,137,000,000 francs (\$991,441,000), against 4,928,000,000 francs (\$951,104,000) in 1896—an increase of 209,000,000 francs (\$40,337,000). In special commerce, the value was 3,954,000,000 francs (\$763,122,000)—an increase of 248,000,000 francs (\$47,864,000).

In the general commerce, the exportations amounted to 4,863,000,000 francs (\$938,559,000), against 4,553,000,000 francs (\$878,729,000) in 1896—an increase of 310,000,000 francs (\$59,830,000).

The exportations in special commerce amounted to 3,598,000,000 francs (\$694,414,000) in 1897, against 3,400,000,000 francs (\$656,200,000) in 1896—an increase of 198,000,000 francs (\$38,214,000).

There is a wide disparity between the totals for 1896-97 and those for 1895-96, when the difference was but an increase of 42,000,000 francs (\$8,106,000) for general commerce and 106,000,000 francs (\$20,458,000) for special commerce. It should be noted that the difference in the totals recorded this year are about the same as the averages established by Charles Roux for the five years previous to 1896, and that they have no relation to the increase recorded in Germany and England, and to the formidable expansion of commerce and navigation in those two countries.

If we examine trade figures in regard to the division of merchandise among food supplies, raw materials for use in industry, and manufactured articles, we find that the special imports of raw material for industry were, in 1897, 145,000,000 francs (\$27,985,000) more than in 1896.

This result would seem favorable to the activity of our mills and the employment of our working forces, if, following up the inquiry for the first ten months of 1898, as compared with the first ten months of 1897, we did not find a diminution in 1898 of nearly 18,000,000 francs (\$3,474,000) in the importations of the same materials for use in industry.

General résumé of importations and exportations united from 1892 to 1897.

Year.	General commerce.	Special commerce.
1892	\$1,937,400,000	\$1,529,600,000
1893	1,855,400,000	1,418,200,000
1894	1,783,800,000	1,385,600,000
1895	1,901,600,000	1,418,600,000
1896	1,904,400,000	1,439,800,000
1897	1,988,000,000	1,510,800,000

NOTE.—The distinction between general commerce and special commerce applies to importations as well as to exportations. As regards importation, general commerce consists of all the merchandise that arrives from abroad, from French colonies and from the Great Fisheries, by land or by sea, as well for consumption as for storage, in transit or for reshipment, reexportation, or temporary sojourn. Special commerce includes the merchandise which is left to the disposition of importers; that is to say, the aggregate of the merchandise exempt from duty, and, as regards dutiable merchandise, the quantities which have paid duty. As regards exportation, general commerce consists of all the merchandise, French or foreign, which leaves France. Special commerce consists of the domestic merchandise exported and the foreign merchandise sent back to foreign ports, after having been admitted free, or nationalized by the payment of duty.*

In considering the tables of 1896–97 as a whole, we record for 1897 a more notable increase in exportations than in importations. The total increase in importations in special commerce is 202,000,000 francs (\$38,986,000) in round numbers, against an increase of 275,000,000 francs (\$53,075,000) in exportations.

This is also a proof of a condition the reverse of prosperous. We will not explain here why the balance of commerce differs sensibly from the economic balance. All competent statisticians justly include in the latter the financial movement and the fortune of the country interested, especially when it is a question of an old and rich country like France. A more important reason why our country should be included in this category is because it is, above all, what economists call an interest-receiving country. It suffices to cite the Suez Canal, which for a net investment of 72,000,000 francs (\$13,896,000) returns about 50,000,000 francs (\$9,650,000).

To this general statement should be added the incidental fact that during recent years proposed income-tax bills have alarmed many French capitalists, causing them to make heavy investments abroad. Now, investigation and experience prove that a country which has large investments abroad has, as a consequence, a permanent source of importations, and is not compelled, in order to pay for them, to establish a corresponding volume of exportations. The disparity between our exportations and importations, to the detriment of the latter, constitutes—especially since our importations ought to have increased—a fact that is anomalous and disquieting to the equilibrium of our commercial affairs.

Statisticians such as M. de Neumann-Spallart, who have taken the pains to compare the importations and exportations of all civilized nations, say that the official excess of imports, if the prosperity of foreign commerce is under consideration, ought always to be important in countries which have an enormous merchant marine, like England; or in countries which, like France, on account of their extensive production of objects of luxury and the large number of rich foreigners who come

*NOTE BY CONSUL.—Officials of the Lyons Chamber of Commerce think that a better definition than the above would be: General commerce in importations includes all that enters France; special commerce includes all that enters and is consumed here.

here and make private purchases, have a great quantity of exportations which are not counted.

To those who, for the sake of the balance of trade, wish to see our exports increase, destroying the difference between them and our imports, we will content ourselves by citing, after M. Paul Leroy-Beaulieu, the following example: When France had to pay 5,000,000,000 francs to Germany, after the peace of 1871, although a large part of that sum was furnished by the sale of bonds and stocks, she saw her exports, during a few years, exceed her imports, contrary to the usual course of things. In 1870, the excess of imports was still 65,300,000 francs (\$12,602,900), and in 1871, 694,000,000 francs (\$133,942,000). But in 1872, there was an excess of 191,300,000 francs (\$37,563,000) in exports, and in 1873 an excess of the same to the amount of 326,700,000 francs (\$63,053,100). Then, the excess returned to imports. Germany, on the other hand, which was to receive enormous sums from France, had a colossal excess of imports over exports. This excess of imports into Germany, according to Soetbeer, was, in 1873, 878,000,000 marks (\$235,304,000).

SPECIAL COMMERCE.

A comparison of importations and exportations between the years 1896 and 1897.

Description.	1897.	1896.	Increase in 1897.
<i>Importations.</i>			
Articles of food.....	\$207,150,600	\$201,322,400	\$5,828,200
Materials necessary to industry.....	468,620,000	424,716,400	33,905,600
Manufactured articles.....	124,252,600	123,677,000	575,600
Total.....	800,023,200	750,715,800	40,309,400
<i>Exportations.</i>			
Articles of food.....	145,810,600	130,358,600	15,452,000
Materials necessary to industry.....	188,791,600	167,241,400	21,550,200
Manufactured articles.....	368,034,800	353,352,800	14,682,000
Postal package.....	32,485,600	29,231,200	3,254,400
Total.....	735,122,600	680,184,000	54,938,600
Grand total.....	1,535,145,800	1,430,899,800	95,248,000

If we consider the merchandise imported into this country according to its importance, the principal imports will appear in the following order:

	Francs.
(1) Raw wool.....	343,000,000 = \$66,199,000
(2) Wine	280,000,000 = 54,040,000
(3) Silk and bourres de soie.....	266,000,000 = 51,338,000
(4) Cereals.....	246,000,000 = 47,478,000
(5) Cotton	205,000,000 = 39,565,000
(6) Raw and carbonized coal (Houille crue et carbonisée)..	189,000,000 = 36,474,000
(7) Common woods.....	154,000,000 = 29,722,000
(8) Oleaginous seeds and fruits.....	135,000,000 = 26,055,000
(9) Raw hides and peltry.....	116,000,000 = 22,388,000
(10) Coffee.....	105,000,000 = 20,265,000

The exportations, in the line of special commerce, are as follows:

	Francs.
(1) Silk and bourres de soie.....	270,000,000 = \$52,110,000
(2) Woolens	265,000,000 = 51,145,000
(3) Wines	232,000,000 = 44,776,000

	Francs.
(4) Raw wool, combed wool (dyed), and waste.....	172,000,000 = \$33,196,000
(5) Toys, playthings, kickshaws, brushes, etc.....	160,000,000 = 30,880,000
(6) Cottons.....	119,000,000 = 22,967,000
(7) Silks.....	117,000,000 = 22,581,000
(8) Prepared leather.....	102,000,000 = 19,686,000

The principal countries from which merchandise was received, and to which it was sent, were in the following order:

Importations.

(1) England.	(5) Spain.	(9) China.
(2) United States.	(6) Algeria.	(10) Italy.
(3) Germany.	(7) Russia.	(11) British Indies.
(4) Belgium.	(8) Argentina.	(12) Turkey.

Exportations.

(1) England.	(5) Algeria.	(9) Brazil.
(2) Belgium.	(6) Switzerland.	(10) Argentina.
(3) Germany.	(7) Italy.	(11) Turkey.
(4) United States.	(8) Spain.	(12) Holland.

Our ally, Russia, holds only the fourteenth place among our exports, coming after French Indo China. Our urgent appeals to the Russian Government, through the intermediary of the Minister of Commerce and of Foreign Affairs, have met that indifference which is found only among friends.

We have, however, been able to learn officially that every time we ask Russia for anything of an important character affecting the tariff, she proposes that we take into consideration the question of lowering the duty on her wheat to the amount of 7 francs. This piece of information will doubtless be of interest to the Chamber.

If we glance over the list of our exports and imports with the principal nations of which we have just spoken, we note an augmentation of 156,000,000 francs (\$30,108,000) in the imports from Russia into France, while our exports to Russia remained stationary. The interest on our money, however, exerts an important bearing on this movement. From 1896 to 1897, the importations into France from England have diminished 26,000,000 francs (\$5,018,000), while the exportations from France to England increased 135,000,000 francs (\$26,055,000). It is, unfortunately, true, contrary to what happens in regard to Russia, that the invasion of French industry by English capital is not unallied to this increase in our exportations.*

Our imports from Germany have not varied. Our exports to Germany have risen 40,000,000 francs (\$7,720,000). Our situation, in regard to Belgium, shows the usual excess of about 200,000,000 francs (\$39,600,000) of exports over imports. The situation has not changed materially. It is worthy of remark that Germany and Belgium are the two countries which are the most prosperous at this time.

Our relations with Switzerland have not varied notably. Our exports to Italy had increased, but the recent commercial treaty causes our relations with that country to be interesting only as they affect the future.

Imports from Spain decreased 40,000,000 francs (\$7,720,000) in 1897, while exports to Spain decreased only 2,000,000 francs (\$396,000). These fluctuations, of course, must be attributed to the troubled condition of that unhappy country. The

* NOTE BY CONSUL.—France has loaned many millions to Russia and receives interest in Russian imports, destroying her Russian market for French products. English capital has been invested in French industry, and the interest of this English money is paid in French products.

increase of duty on wine and the opening of our frontiers to the wine of Italy are destined to slightly decrease Spanish importations into France.

Our foreign trade with Turkey, which was diminishing in competition with that of Germany, took a favorable turn in 1897.

Our relations with the United States have not undergone any perceptible improvement; importations and exportations combined represent 680,000,000 francs (\$31,240,000). There is nothing surprising in this, in view of the Dingley tariff bill.

Our trade is declining with Brazil, the Argentine Republic, the English Indies, Chile, Holland, St. Pierre and Miquelon, Haiti, Senegal, and the Dutch Indies.

It may be seen from these details that we stand stationary in the midst of the colossal progressive movement conspicuous among all rival nations.

So far as navigation is concerned, the total steam tonnage for 1896 was 22,774,000 tons, entered and cleared combined. For 1897, it was 23,735,000 tons, but we must remember that in this movement foreign ships figure for a tonnage which has been increasing since 1892. From 12,000 in 1892, the number rose to 15,000 in 1897, so that the proportion of our marine in this movement figures for only 88 per cent.

For sailing ships, the tonnage in 1897, slightly inferior to that of the preceding year, amounts to 1,538,000 tons, cleared and entered for the entire movement of navigation.

Notwithstanding the protection afforded by the law of 1893, the proportion of French sailing ships which entered was only 790, or 477,000 tons.

On December 31, 1897, our merchant marine possessed only 14,352 sailing ships and 1,212 steamships, only 55 of which were of 2,000 tons burden or more.

Table giving the strength of the merchant marine December 31, 1897.

Classification of vessels according to tonnage.	Sailing vessels.		
	Number of vessels.	Tonnage.	Crew.
Vessels below 30 tons.....	12,182	90,176	45,910
From 30 to 50 tons.....	789	29,937	4,604
50 to 60 tons.....	146	7,914	1,030
60 to 100 tons.....	531	42,190	6,426
100 to 200 tons.....	406	54,205	5,553
200 to 300 tons.....	96	22,970	1,223
300 to 400 tons.....	61	21,627	569
400 to 500 tons.....	36	15,785	438
500 to 600 tons.....	15	8,323	200
600 to 700 tons.....	12	7,802	204
700 to 800 tons.....	4	2,966	71
800 to 1,000 tons.....	8	7,169	142
1,000 to 1,200 tons.....	19	20,855	402
1,200 to 1,500 tons.....	17	23,434	366
1,500 to 2,000 tons.....	8	13,322	241
2,000 tons and above.....	22	52,787	773
Total.....	14,352	421,462	68,132

Table giving the strength of the merchant marine, etc.—Continued.

Classification of vessels according to tonnage.	Steamers.			
	Number of vessels.	Tonnage.	Crew, properly speaking.	Mechanicians and firemen.
Vessels below 30 tons.....	556	5,061	1,925	838
From 30 to 50 tons.....	73	2,697	346	164
50 to 60 tons.....	22	1,175	123	54
60 to 100 tons.....	79	6,357	508	235
100 to 200 tons.....	55	8,058	427	212
200 to 300 tons.....	21	5,212	205	111
300 to 400 tons.....	25	8,822	283	172
400 to 500 tons.....	27	12,201	331	187
500 to 600 tons.....	28	15,479	358	201
600 to 700 tons.....	33	21,105	475	364
700 to 800 tons.....	36	27,096	657	462
800 to 1,000 tons.....	71	63,651	1,284	686
1,000 to 1,200 tons.....	25	28,683	585	346
1,200 to 1,500 tons.....	40	52,440	933	579
1,500 to 2,000 tons.....	65	112,453	2,079	1,174
2,000 tons and above.....	55	1,8,927	1,460	1,509
Total.....	1,212	499,407	12,985	7,254

Steamers and sailing vessels united.

Classification of vessels according to tonnage.	Number of vessels.	Tonnage.	Crew, properly speaking.	Mechanicians and firemen.
Vessels below 30 tons.....	12,738	95,237	47,835	835
From 30 to 50 tons.....	852	32,635	4,950	154
50 to 60 tons.....	168	9,087	1,153	51
60 to 100 tons.....	610	48,547	6,934	235
100 to 200 tons.....	461	62,243	5,960	212
200 to 300 tons.....	117	28,182	1,428	111
300 to 400 tons.....	85	30,449	852	172
400 to 500 tons.....	63	27,986	769	187
500 to 600 tons.....	43	23,802	558	201
600 to 700 tons.....	45	28,907	679	364
700 to 800 tons.....	40	30,062	728	422
800 to 1,000 tons.....	79	70,830	1,426	686
1,000 to 1,200 tons.....	45	49,558	988	346
1,200 to 1,500 tons.....	57	75,874	1,299	579
1,500 to 2,000 tons.....	73	125,775	2,320	1,174
2,000 tons and above.....	77	181,714	3,233	1,509
Total.....	15,564	920,871	81,112	7,254

Our merchant marine is in such a state of decadence as to cause grave alarm. It is no longer a question, as is the case with the merchant marine of England and Germany, of competing with foreign ships in their ports; we have just seen from the statistics of navigation that we find it difficult to compete with foreigners even in our own ports.

England produces 202,000,000 tons of coal per year. She exports 37,000,000 tons, of which we receive 5,000,000 tons. Her ships are thus admirably placed to bid for our freight. When they and the German ships have received their cargo, they have only the expense of a return voyage, and our vessel owners are vanquished by low freight rates, which they can not meet.

The evil is grave because it is connected with the different branches of national activity. A country whose merchant marine is weakened is deprived of a great part of its power. Our general economic policy ought to be to combine navigation and commerce, and utilize the sacrifices made by the people to reduce the cost of transportation.

In 1789, our commerce and industry were not inferior to those of England, but our foreign trade, up to 1860, was hampered by our customs policy and our tariff wars. From 1860 to 1880, our foreign trade doubled, and in 1880 the aggregate of our business, which was 5,400,000,000 francs (\$1,042,200,000) in 1859, rose to 10,700,000,000 francs (\$2,065,100,000).* In the same year, special trade rose to 8,500,000,000 francs (\$1,640,500,000). It will be seen how much greater these figures are than those which we have recorded for 1897. After 1880, the commercial treaties began to expire. Every nation remodeled its tariff in the direction of protection, and since 1888 the aggregate of our foreign trade has fallen to 7,200,000,000† francs (\$1,389,600,000). To-day, we are under the tariff of 1892—that is to say, under a policy of commercial instability. There is no branch of commerce or industry that is not at the mercy of a bill in Parliament, or of the whim of a foreign power.

Since free trade is not susceptible of being practiced by one nation alone, commercial treaties are the only means of securing an equilibrium in international trade and of insuring its duration. Such treaties have been resorted to through all periods of history, because they are the most efficacious means of bringing together nations which are not united by a community of economic views.

In the different articles of merchandise, the exchange of which we have referred to in the comparative résumé of importations, there is one which, after having figured in the rank of first importance in 1892 and 1894‡ and in the fourth rank in 1897, will hold the first rank in 1898. We refer to cereals. Statistics for the first ten months of the last year, show an importation of 29,154,978 metric quintals,§ against 9,592,934 metric quintals for 1887. This is almost 9,000,000 quintals more than the imports of 1892.

This unlimited importation is due to the decree of May 13, 1898, suspending to July 1 the application of the duty of 7 francs. The necessity for that decree demonstrates that agriculture had too much protection, and that "the best is often the enemy of good." A lower duty, such as the Chamber of Commerce of Marseilles proposed, would have had the double advantage of protecting agriculture against the flood of importations let loose by the suspension of the law, and of assuring the stability necessary to commerce and industry.

But the time has now come to go farther; the production of cereals now covers about 15,000,000 hectares (37,065,000 acres), about three-fifths of our cultivated land; wheat and meslin are sown on 7,000,000 hectares (17,297,000 acres); rye, on 1,500,000 hectares (3,706,500 acres).

We borrow from the interesting publication *Le Marché Française* a memorandum prepared by its distinguished director, M. Cornu. It indicates in a very forcible

* NOTE BY THE BUREAU OF FOREIGN COMMERCE.—The general commerce in 1891 was 10,668,800,000 francs (\$2,059,078,400), only \$5,021,600 less than the boasted year given by the commission; and the special commerce for the same year amounted to 8,337,800,000 francs (\$1,609,195,400), being only \$31,354,600 less than the special commerce of 1880.

† NOTE BY THE BUREAU OF FOREIGN COMMERCE.—The commission, although failing to so state, must have intended these figures (7,200,000,000) for the average annual "special" commerce of France for the ten years (1888-1897) under consideration; but, even thus, they fall below the actual figures to the extent of 304,370,000 francs per annum, or an aggregate for the ten years of 3,043,700,000 francs (\$587,434,000). During the same years, the average annual value of the "general" commerce amounted to 9,742,910,000 francs (\$1,880,381,630).

‡ NOTE BY CONSUL.—Cereals held the second rank in 1893, the seventh in 1895, and the ninth in 1896.

§ 1 metric quintal = 220.46 pounds.

manner the importance attained by wheat sowing, and the arrangements for the harvest of 1898. We need between 125,000,000 and 127,000,000 hectoliters (354,750,000 and 360,042,600 bushels). The Government has provided for this year a yield of 131,000,000 hectoliters (372,778,000 bushels). Here is a surplus that must be disposed of. If the crop is good next year, and the agriculturists apply to the Government to aid them in selling this surplus production, we will make an appeal to commerce. Will the grain buyers and flour mills respond to that appeal? In other words, have they been able to hold their markets?

The English market is at our doors. It annually buys 60,000,000 hectoliters (170,000,000 bushels) of wheat, and over two-thirds as much flour. America provides it. As a logical sequence, the duty of 7 francs per quintal (\$1.35 per 220 pounds) causes the quintal, which on December 17 cost 14.70 francs (\$2.84) in New York and 16.50 francs in London, to sell in our market at 20.50 francs and 21 francs (\$3.96 and \$4.05).

The temporary admission of grain ought to exert a good influence in developing foreign trade and in giving employment to our industrial plants, which suffered so much from the customs duty on wheat. But notwithstanding our urgent demands, free entry has not yet been granted for corn and beans. New obstacles are daily thrown in the way of the temporary free entry of wheat.

It would be to the interest of our agriculturists if arrangements could be made to export a given quantity of soft wheat flour for a similar quantity of hard wheat, received duty free by temporary entry. The market would thus be relieved.

The report continues through a few pages to argue in favor of reciprocity, opposes retaliatory duties, declares that the United States would readily accommodate itself to higher duties on cotton-seed oil, reviews the tremendous progress made by the United States in foreign commerce, and recommends temporary admission, free of duty, of corn and beans. After setting forth that the chambers of commerce of Marseilles, Havre, Dijon, Dunkirk, and the Syndical Chamber of French Millers, numbering 3,000 members, have all petitioned in favor of the temporary admission of corn and beans, duty free, the report says:

Not only does bean flour perform an important part in the work of the miller in permitting the fuller utilization of wheat possessing but little gluten, but its efficacious action in virtue of its special chemical qualities permits a diminution of the quantity of foreign wheat, called hard wheat, which millers are now obliged to add to their grist.

Corn produces *semolina** and different kinds of flour destined for food for human beings and coarser feed for animals. Besides this, Belgian, German, and Swiss brewers use large quantities of it in their beer, extracting it from what Americans call "flint corn."

Corn is grown in France only in a few departments in the southwest, and the yield there hardly suffices for local consumption. It is insufficient to supply demands for exportation. Therefore, an application of the policy of temporary admission duty free could in no way injure our agricultural interests.

The millers of Marseilles assert that a large foreign market could be found for *semolina* and corn flour. The opportunity to use corn in their mills would, by the free temporary admission of that commodity, be very useful when, the exportation

*NOTE BY CONSUL.—A kind of *semicelli*.

of wheat flour becoming difficult, millers may be obliged to partially suspend work or to compete with millers in the center, east, and north of France.

The report concludes by an argument on the necessity of cheaper railroad transportation.

LYONS, *April 13, 1899.*

JOHN C. COVERT,
Consul.

WHEAT FOR ALIMENTARY PASTES IN FRANCE.

In several European countries, the different forms of edible pastes known as macaroni, spaghetti, vermicelli, nouilles, etc., are produced in very large quantities. From a small and somewhat local business it has become a large, prosperous, and constantly increasing industry, upon which millions of people depend for their food. As this increase has created a state of affairs which may become of direct advantage to the agricultural and exporting interests of the United States, it is worthy of the attention I give it in this report.

The manufacture of these preparations of flour was first carried on in a small way in Sicily and southern Calabria, and then on a much larger scale in Naples. In the enterprising business center of Genoa it became a staple article of trade, and an improvement in quality was followed by a rapid increase in demand. At Marseilles, the different branches of the industry were specialized. There the selection, purchase, and preparation of the proper kind of wheat for paste making became a distinct trade, or rather constituted a separate branch of commerce and manufacture. Certain men made a business of buying the wheat, of grinding it into the sort of "grists" or "semoule" which is used for making edible pastes, and of selling the semoule to the paste makers and the by-products of the wheat to other customers. There are now importers and brokers in these special kinds of wheat, grinders of the semoule, and a class that sells the semoule to paste makers. It has thus become easy for manufacturers to obtain the precise quality of wheat desired for the different pastes. A number of establishments are constantly employed in making large hydraulic presses for the production of these pastes, and the industry is carried on extensively in France, Italy, Germany, Switzerland, and some other countries.

It is estimated that the French output of these pastes is from 120,000,000 to 170,000,000 pounds per annum, and this product is unquestionably destined to increase greatly. To Americans, it may seem strange that the power to purchase wheat foods is only now becoming general in most of the civilized countries. Thirty years ago, black rye bread was universally consumed by the working classes

and the peasantry in France. Bakers tell me that they all sold rye bread up to about 1870; now, it is rarely found in any bakery and is eaten only in the country. The president of the millers' syndicate of this city tells me that the masses of the French people want white wheat bread and the best of it. The president of a British economic association stated last autumn that the wheat eaters of the world were 371,000,000 in 1871 and 516,000,000 in 1898, an increase of 145,000,000. Every great railroad opened adds to the number of wheat eaters.

As the use of wheat has become more general and the power to pay for it has grown correspondingly, it is but natural that a strong tendency to seek variety in its preparation for food should exist. Again, when vegetables are scarce, as is frequently the case in winter, there will be an increased demand for the food products of flour. The new and better methods for the manufacture of the edible pastes, the knowledge of just the kind of pastes certain classes of wheat will produce, and the improvements in the heating and drying processes are coincident with the sudden and widespread increase in the use of wheat foods. The continued growth of this industry will depend upon the supply of special kinds of wheat, for a decline in consumption would immediately follow any attempt to manufacture pastes of ordinary wheat.

Paste makers are unanimous in the opinion that American wheats will not answer their purposes; but, when one considers the almost endless variety of our soil and climate, it seems that some locality must be found where a suitable wheat can be grown.

What is wanted is a hard wheat, containing a large percentage of gluten and a relatively small percentage of starch. Our wheat is lacking in both these desiderata. But all gluten is not alike. Some chemists tell me that the excellence of the gluten depends upon the relative quantities of two substances which they have extracted from it, to wit, gliadin and glutenine. They have formulated rules and methods for the study of this question, which will no doubt be of service to those who wish to follow it up. It may be, however, that the quality of gluten depends upon some other elements. But there is a tendency to attribute excellence of gluten to a proper proportion of gliadin and glutenine.

An American chemist, Mr. Edwin W. Serrel, now living near Lyons, has carefully investigated this subject and informs me that the wheat which is now considered the best is that grown in the neighborhood of Taganrog, Russia; the next is from Algeria. That produced in southern Italy, where the manufacture of pastes originated, has lost the high place it formerly held. The best wheat grown in France—considered better than the American product—is from the neighborhood of Clermont-Ferrand.

Rapidity of growth and ripening is considered of prime importance in the production of the desired qualities in the wheat. These are the chief factors in the Taganrog product. If our farmers could produce such a wheat, it would find more uses than in the pâtes alimentaires above referred to. There would be an excellent market in years of drought in Russia.

Millers and bakers in France have found that bread is improved by putting into it a larger amount of gluten than is found in French or American wheats, and as a consequence very hard wheats—the Taganrog, generally—are mixed with the others. These wheats can not be raised in France, but must be imported, and they are the only kinds which are always sure to find a market in this country, as the French farming community will always demand, and are politically strong enough to secure, a high protective tariff on wheat and other grain.

The great development of American exports and the enormous trade balances in favor of the United States are at this moment exciting the utmost alarm, and it is possible that American producers may be compelled to fight increased efforts to bring about a more even balance of trade. If it be remembered that the French people eat more bread than any people in the world; that, generally, France needs very little ordinary wheat, but that she always will need a very considerable percentage of hard wheat ("hard" is not understood in the American sense in France), it will at once be seen that there is a possibility of finding a large opening for American agricultural products in this country, not to speak of the great consumption of hard wheat in such macaroni and spaghetti eating countries as Italy and Spain.

Moreover, as the experience of the French has proven that an admixture of hard wheat, in small quantities, improves the quality of the bread, it is reasonable to infer that this practice will extend to other countries, further enlarging the market for hard wheats. The authority quoted above expresses the opinion, after a long study of the varied climate of the United States, that all hard wheats can be produced there, if the matter receive the proper attention. These wheats are now grown to a certain extent in Tunis, Algeria, India, and Canada, as well as in Russia. Very little, however, reaches this country from Canada.

JOHN C. COVERT,

LYONS, *April 19, 1899.*

Consul.

GERMANY'S BEET-SUGAR INDUSTRY FROM 1877 TO 1899.

Everyone who has ever tried to collate facts and figures concerning the production of sugar of the world, or of any individual country, knows how well-nigh impossible it is to secure exact data relating to the subject.

In the following, I have endeavored to compile from the most recent and reliable sources all the statistical material bearing on the beet-sugar industry in Germany during the past twenty years, which, I trust, may be of some use for future reference. As will be seen, the data have been grouped under three heads:

- (a) Those relating to work done in the sugar-beet fields.
- (b) Those relating to work done in the beet-sugar factories.
- (c) Those relating to the marketing and consumption of beet sugar.

The unit of weight used in these tables is the metric ton, of 1,000 kilograms (2,204.6 pounds), which is generally adopted in Europe.

A.—*Sugar-beet farming.*

Year.	Area cultivated.	Beets harvested per acre.	Value of beets per acre.	Average prices of beets per ton.
	<i>Acres.</i>	<i>Tons.</i>		
1877-78.....	258,809	11,088	\$55.45	\$5.00
1878-79.....	266,075	11,696	62.48	5.00
1879-80.....	279,230	10,199	55.57	4.85
1880-81.....	292,574	13,234	67.49	4.60
1881-82.....	299,624	11,453	61.28	5.40
1882-83.....	319,406	13,922	73.19	5.30
1883-84.....	347,924	12,100	63.83	5.30
1884-85.....	370,840	13,314	52.59	4.00
1885-86.....	343,145	12,221	46.44	3.80
1886-87.....	365,169	12,141	43.24	4.60
1887-88.....	651,815	10,684	49.68	4.70
1888-89.....	691,897	11,412	54.78	4.30
1889-90.....	752,259	13,314	61.25	4.60
1890-91.....	825,825	13,031	63.86	4.90
1891-92.....	861,583	11,412	54.21	4.80
1892-93.....	869,829	11,291	54.20	4.80
1893-94.....	954,995	11,125	55.65	4.00
1894-95.....	1,090,801	13,273	63.71	4.80
1895-96.....	930,749	12,546	51.44	4.10
1896-97.....	1,049,881	13,072	53.60	4.10
1897-98.....	1,079,810	8,619	50.48	4.00
1898-99.....	1,054,229	11,519		

B.—Beet-sugar manufacturing.

Year.	Number of factories operating.	Number of steam engines.	Number of horse-power.	Beets worked.	Total production of raw sugar.	Total production of molasses.	Average production per ton of beets.	Raw sugar from 1 ton of beets.	Beets required for 1 ton of sugar.	Sugar in the beet.	Number of work-days.	Beets worked in 12-hour day.	Number of sugar refineries.	Total production of raw sugar including that from molasses.
				Tons.	Tons.	Tons.	Tons.	Pounds.	Tons.	Per cent.	Tons.	Tons.		Tons.
1877-78	320	2,413	25,788	4,079,668	378,009	122,813	1,140	203.7	10.82	9.24	75,320	54	64	383,818
1878-79	324	2,493	26,882	4,628,748	446,155	133,652	1,315	203.04	10.86	9.21	75,895	61	63	430,684
1879-80	328	2,627	29,586	4,865,262	409,415	131,371	1,248	187.83	11.74	8.52	70,909	67.8	61	424,125
1880-81	333	2,812	32,269	6,322,203	555,915	164,084	1,660	191.8	11.37	8.79	82,952	77.1	58	564,223
1881-82	343	3,046	35,476	6,271,948	599,722	159,813	1,748	210.75	10.46	9.56	76,325	82.2	58	644,780
1882-83	358	3,365	40,515	8,747,154	831,995	196,305	2,603	209.66	10.51	9.51	94,816	92.3	58	848,124
1883-84	376	3,715	46,158	8,918,130	940,100	207,978	2,500	232.36	9.49	10.54	89,956	99.1	57	985,493
1884-85	408	4,196	56,119	10,402,688	1,123,030	259,700	2,753	237.88	9.26	10.79	97,065	107.2	61	1,154,817
1885-86	399	4,188	57,104	7,070,316	808,105	183,178	2,025	251.99	8.75	11.43	65,642	107.2	60	838,131
1886-87	401	4,276	58,770	8,306,671	985,628	215,887	2,458	261.69	8.43	11.87	72,593	114.4	48	1,011,918
1887-88	391	4,292	58,325	6,963,951	910,698	183,037	2,329	288.36	7.65	13.08	59,856	116.3	48	960,496
1888-89	396	4,363	60,313	7,876,183	944,595	201,189	2,385	263.67	8.36	11.96	66,727	118.3	46	990,891
1889-90	401	4,599	63,753	9,822,635	1,213,687	240,797	3,027	272.49	8.03	12.36	76,447	128.5	51	1,261,353
1890-91	406	4,716	68,691	10,623,319	1,284,485	263,094	3,164	266.53	8.27	12.69	79,138	134.2	52	1,336,220
1891-92	403	4,879	73,211	9,488,002	1,144,368	244,979	2,840	265.87	8.29	12.66	65,430	145	51	1,168,026
1892-93	401	5,122	81,566	9,811,040	1,171,843	211,805	2,922	263.23	8.37	11.94	64,357	157.4	58	1,230,835
1893-94	405	5,256	87,421	10,644,352	1,316,665	279,209	3,251	272.47	8.10	12.34	63,294	168.2	57	1,366,001
1894-95	405	5,324	94,052	14,521,030	1,369,805	347,090	4,362	267.86	8.23	12.15	80,185	161.1	55	1,827,974
1895-96	397	5,320	97,977	11,672,816	1,537,522	358,463	3,873	285.82	7.63	13.11	59,417	166.5	56	1,637,057
1896-97	399	5,446	105,788	13,721,601	1,738,885	342,322	4,358	279.1	7.9	12.66	68,757	199.6	51	1,821,223
1897-98	402	5,503	114,211	13,697,892	1,755,229	344,480	4,366	281.97	7.8	12.79	63,442	215.9	50	1,844,400
1898-99	401			12,144,291	1,710,000		4,264	310.42	7.1	13.15			54	1,725,000

C.—Beet-sugar marketing and consumption.

Year.	Total export of raw sugar.	Export to United States.	Export to Great Britain.	Total import of raw sugar.	Total import of refined sugar.	Total consumption.	Consumption per capita.	Mean prices per pound.		Total proceeds from taxes, duties, etc.			Per capita.
								Raw sugar.	Refined sugar.	Receipts from—		Export bounties paid.	Total net proceeds.
										Taxes.	Duties.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Pounds.	Cents.	Cents.	\$	£	Cents.	Cents.
1877-78	71,201	.....	.....	1,107	4,915	290,114	14.77	6.26	8.8	\$15,578,407	\$563,842	\$4,240,531	\$11,892,717
1878-79	137,250	.....	.....	1,530	3,092	296,049	14.77	6.1	8.37	17,626,273	502,840	6,035,673	12,093,200
1879-80	132,597	.....	.....	1,676	2,983	281,514	13.88	7.44	9.28	18,296,317	411,637	5,745,652	12,062,337
1880-81	283,108	.....	.....	1,265	2,265	277,619	14.991	6.69	8.74	25,433,225	352,470	13,438,421	10,971,074
1881-82	314,693	.....	.....	1,595	2,202	291,045	14.33	6.69	8.85	24,635,633	361,207	10,332,190	13,912,684
1882-83	471,762	.....	.....	2,371	2,104	326,045	17.8.7	6.45	8.15	33,310,111	411,768	17,706,645	16,014,280
1883-84	594,702	.....	.....	1,875	1,558	349,671	16.575	5.66	7.66	35,520,449	333,317	22,919,935	11,373,610
1884-85	682,484	.....	.....	2,076	1,261	438,665	21.826	3.93	5.61	39,613,463	328,112	30,571,744	9,366,853
1885-86	499,318	.....	.....	2,620	1,230	313,253	11.991	5.08	6.53	26,021,825	341,456	21,436,081	5,820,146
1886-87	658,368	.....	.....	1,658	1,452	351,475	16.975	4.11	7.72	33,668,694	293,216	25,899,398	8,002,512
1887-88	512,063	.....	.....	4,072	1,583	398,163	20.944	5.18	6.48	28,176,105	442,442	25,125,184	3,403,126
1888-89	610,207	11,426	274,277	2,015	1,098	357,614	15.653	3.78	6.21	25,856,172	351,586	19,058,088	7,162,610
1889-90	741,581	35,420	486,725	2,109	1,631	447,115	22.31	3.23	6.05	33,546,670	359,380	14,746,486	10,173,042
1890-91	747,571	140,203	472,365	3,694	2,791	470,253	23.325	3.45	5.88	36,142,442	537,166	18,658,728	18,030,886
1891-92	690,320	34,358	434,368	4,420	3,497	476,295	23.325	3.97	6.42	34,156,570	746,844	17,757,118	17,145,996
1892-93	722,413	113,319	479,656	937	1,005	501,319	24.207	3.02	5.88	20,463,240	165,430	8,199,338	12,427,170
1893-94	724,153	115,068	529,520	660	448	516,635	24.66	2.72	5.72	22,185,646	98,770	7,713,438	10,576,978
1894-95	1,040,551	134,128	641,609	733	448	552,595	16.168	1.84	4.48	23,854,407	124,712	3,576,044	20,399,932
1895-96	952,637	103,932	571,547	765	465	668,860	31.217	2.38	4.97	28,930,804	130,990	4,386,866	24,086,932
1896-97	1,220,592	500,139	575,262	665	761	585,234	23.259	2.14	5.04	26,643,148	121,380	6,083,776	20,686,775
1897-98	1,013,252	142,997	666,263	513	797	803,897	28.814	2.18	5.04	32,626,230	105,910	8,724,842	24,007,268
1898-99	.....	.....	.....	.....	.....	.....	.....	2.25	5.13	.....	.....	.....	.....

As the future of the German export trade in sugar has of late been engaging many minds, I would call special attention to the above figures bearing on this export up to the present date. These very clearly show that Germany must find an outside market for two-thirds of her production, and that most of this surplus for the past five years has been sold to England and the United States. It will also be seen that in 1897 more than double the usual quantity was rushed to our country in anticipation of the enactment of the Dingley law, but that the following year (1898) showed again a fair average of export. The first three months of the present calendar year seem to furnish no reason for complaint to the German exporter of sugar. From January 1 to March 31, 1899, the values of sugar declared at the United States consulates at Magdeburg, Hamburg, Danzig, and Stettin for export to the United States amounted to \$3,739,934.06, which is an increase of \$3,455,695.29 over those reported during the first quarter of last year.

I close this report by adding a short table showing exports of German sugar from the consular district of Magdeburg during the past four years:

Beet sugar exported from Magdeburg to the United States.

Calendar year.	Raw sugar.	Refined sugar.
1895	\$943,123.84	\$133,967.75
1896	4,302,535.60	610,960.46
1897	5,073,200.29	329,379.58
1898	4,735,957.82	32,930.38

HENRY W. DIEDERICH,

MAGDEBURG, April 20, 1899.

Consul.

REDUCTION OF SULPHUR ORE IN SICILY.

At the request of a resident of Missouri, a Department instruction was sent under date of October 27, 1898, to the consuls at Catania and Palermo, asking for a description of the methods in vogue for the reduction of sulphur ore. The replies* are given below.

CATANIA.

There are four different methods employed for the fusion of sulphur ore, known, respectively, as the calcarone, Gill, Fiocchi, and Orlando systems.

The first, the calcarone, is the primitive mode of extraction, and is the one generally used. The kiln is built into the ground to

*Advance Sheets of which have been sent the correspondent.

a depth of 6 to 9 feet, the walls being of masonry and cylindrical in form, with a sloping floor of stone and gypsum. When the calcarone, or kiln, is filled, the ore at the bottom is in large pieces, so that there may be no impediment to the "olid" (Sicilian term for molten sulphur) running out, and the pieces of ore become gradually smaller until the top of the calcarone is reached. The ore is then heaped up in the form of a large cone and is covered with turf, sand, and refuse from former fusions, in order to prevent loss and protect it somewhat from the elements. During the filling process, several air shafts are placed into the ore, by means of which the fire is communicated thereto, and through combustion of the mineral itself the whole mass melts, this process lasting from ten to twenty days. A small hole is made at the lowest point of the wall, through which the liquidized sulphur runs and is taken off into square wooden forms, containing from 130 to 170 pounds of sulphur. This is continued day by day, until all the sulphur is extracted. The capacity of the kilns varies from 7,000 to 52,500 cubic feet, and one fusion of a large calcarone lasts three months. One great disadvantage of this system is the damage to vegetation by sulphur fumes. The calcarone is allowed by law to be in operation only from June 28 to December 31.

The second system, known as the "Gill," is by furnaces or ovens built in masonry similar in form to the calcarone, but much smaller and covered with a cupola in masonry. They are generally built and worked in pairs, and each cell or oven contains from 5 to 30 cubic meters (177 to 1,059 cubic feet) of ore. They are, however, also built in batteries of four, and the system is this: After being charged the ore in one cell is fired and the smoke, instead of passing into the open air, as is the case with the calcarone, passes into the adjacent cell and gradually heats the mineral, until by the time the first cell has finished working, the other has reached such a temperature that the ore ignites and cell No. 1 is again filled; and so the process goes on. The advantage is that the gases, which are heavily charged with sulphur, are not lost, and the percentage of sulphur recovered is considerably higher; further, the time occupied is much less than with the calcarone, the working of each cell occupying from seventy-two to ninety-six hours, according to size; and as very little smoke escapes, the proprietors can work all through the year.

The next system, known as the "Fiocchi" patent, consists of wrought-iron cylindrical receptacles, which are suspended by circular flanges and have an inner perforated shell. When the apparatus has to be filled with ore, it is placed in a vertical position and the ore, before being put in, is broken into small pieces; when filled, it is turned in a horizontal position and a steam pipe

screwed on. Steam at from 60 to 80 pounds pressure is then turned on, passing into the space between the outer and inner shell and to the mineral through the perforations of the inner shell, and, in this way, reaching all parts of the ore. As the mass of ore is heated, the steam becomes dry, and the sulphur fuses and is run off into proper receptacles.

The apparatus is 4 meters long by 1.2 meters in diameter. Three are worked in a row, each containing 3 cubic meters of ore, and seven fusions are made in twenty-four hours. A steam boiler of 16 horsepower is required for the necessary steam. This system is adapted for rich ore or ore that is porous; very hard ore can not be fused. The percentage of sulphur recovered is much greater than with the calcarone method, with the added advantage that the sulphur ore can be rapidly turned into commercial sulphur. The cost of a plant of this kind being rather heavy, the smaller mine owners prefer the old system of calcarone.

The last is the Orlando system, and is the same as the Fiocchi, except that the apparatus always remains horizontal. Four trains, each loaded with about 15 cwt. of ore, are run in on rails and remain during the fusion. The advantage over the Fiocchi system is the greater facility in charging and discharging the apparatus.

SULPHUR REFINING.

All the refining of sulphur, with the exception of one plant at Palermo, is done at Catania. The largest plant consists of four ovens, each containing a battery of ten retorts for refining, capable of turning out 48 tons of refined sulphur in twenty-four hours; four ovens with four chambers for subliming and making flower of sulphur, capable of producing 2,000 tons during a season; and a steam mill with runner edge stones of lava, capable of milling 3,000 half-cwt. bags (165,000 pounds) of sulphur per day.

The refining season commences in October and ends in June. The milling season lasts only about four months—say, from February to June—and the product is used almost exclusively for the sulphuring of vines. In refining sulphur, a large oven in masonry is used, with an arched roof, upon which are placed the cast-iron retorts, which are again covered by another arch upon which are placed cast-iron boxes, surrounded by brickwork. Newcastle coal, mixed with wood in order to obtain an abundance of flame, is used. The fire grate is at the bottom of the oven and the gases and flame ascend by spiral openings and play around the retorts, and the smoke rises by the flues to the cast-iron boxes, and thence to the chimney or stack. The sulphur is put into the cast-iron boxes, where it is fused, and by means of a valve it passes into the re-

torts, where it is transformed into gas; and from there, by a special cast-iron pipe, it passes into the condensers, which are cylindrical cast-iron vessels. The refined sulphur, which has again become liquid, then passes by a special aperture into cast-iron pans, so that it may gain the required temperature, and is then ladled out into cast-iron forms of about 1 cwt. (110 pounds) capacity; or, if roll sulphur is required, it is ladled into metallic molds of the shape usually employed in commerce.

In subliming sulphur, an oven, as described above for refining, is used, but with only two retorts; and the gases, instead of going into the condensers, ascend into a large, specially constructed chamber, lined with bricks, which is hermetically closed, with the exception of a valve in the roof, which opens automatically when the tension produced by the gases is too great for the strength of the chamber. The gases, as they enter the chamber at the necessary temperature, solidify and the sublimed sulphur falls in the form of flakes, like snow, to the ground.

Sulphur of commerce contains from 2 to 5 per cent of impurities. The lower dark-colored qualities—such as good or current thirds—are generally used for refining, owing to their lower price.

The total export of sulphur from January 1 to December 1, 1898, was 415,424 tons, of which the United States received 131,678 tons, France 84,369 tons, and Germany 26,727 tons.

ALEXANDER HEINGARTNER,

CATANIA, *December 27, 1898.*

Consul.

PALERMO.

There are at the present time three methods of reducing sulphur ore in this district, viz, the calcinatory furnace "calcarone," the Gill oven, and by steam.

By the first two methods, the fuel used is sulphur in its mineral state, and by the third pit coal. Reduction by calcinatory furnace is the more general method in use, as the furnace is of easy construction and involves little expense, being operated in the open air and capable of smelting several thousands of tons of ore at a time.

The calcarone is located as near the mouth of the shaft or mine as possible, usually on the side of a hill, in order that when the process of smelting is complete the sulphur may run down the hill in channels prepared for that purpose, part of the sulphur being burned in the process of smelting, in order to liquefy the remainder.

The calcarone is circular in shape and has a floor with an inclination of from 12° to 18°. The wall around it is made of rough

stone, cemented with a mortar of gypsum. At the back of the wall, the thickness is some 45 centimeters, increasing to the front, where it is 1 meter or more, according to the diameter.

In the front is an opening, 1.3 meters high by some 30 centimeters (51 by 12 inches) broad, through which the melted sulphur flows. Two walls run at right angles with the circular wall upon each side of this opening, 80 centimeters in thickness, with a roof over them to strengthen the front of the kiln. The stone floor of the kiln is covered with the refuse of a former smelting, called "ginese." The stonework is from 15 to 25 centimeters (6 to 9.3 inches) in thickness and the covering of ginese is some 20 centimeters in depth, this increasing at the lower extremity. The inner side of the wall is covered with a mortar of gypsum. The capacity of these calcarones varies from 100 to 1,000 tons. It requires thirty days to run off a calcarone of a capacity of 300 tons; sixty days for a capacity of 1,000 tons.

The cost of a calcarone with a capacity of 1,000 tons is 1,500 lire, or about \$300 in United States currency.

In filling the calcarone, the larger blocks of ore are placed in the center, forming, as it were, the backbone of the pile, the remaining space being filled with ore much smaller in size. When the calcarone is filled with ore and covered with ginese, the shape or form of the pile is that of a cone, and after being set on fire resembles a small-sized volcano. As the liquid sulphur comes from the calcarone, it flows into wooden molds, forming solid blocks weighing some 100 pounds.

The quantity of sulphur produced by this system during the years 1890, 1891, 1892, 1893, and 1894, as respects the total production of the mines operated, shows the following proportions: Eighty per cent, 71 per cent, 65 per cent, 66 per cent, and 62 per cent, respectively.

At the present time, about 20 per cent of the total production of sulphur in Sicily is reduced by the "Gill" system. Originally, this system consisted of but two rooms or cells, but at the present time four cells are built together. These have usually from 10 to 50 cubic meters capacity. While the percentage of sulphur obtained by this system is greater than by the calcinatory furnace, the quality is said to be inferior. These ovens being built of solid stone masonry, it is claimed that much heat is saved and again utilized by this system of reduction. One cell only being fired at a time, the ore in the others becomes dried out and is in a much better condition to burn freely when fired, thus saving both time and fuel. The floors of these cells are constructed upon the same principle and of the same material as those of the calcinatory furnace.

Reduction of sulphur ore by steam covers only about 10 per cent

of the production of the mines in Sicily. The boilers or "cookers" in use are of various kinds and forms, some being movable while others are stationary. In those of a cylindrical shape, the ore is placed in a capsule of perforated iron plate inside the boiler. By the more general method, the ore is reduced in small wagons, with perforated bottoms and sides, the steam being conducted through iron pipes. Only a certain quality of the sulphur ore of Sicily—a very small percentage of the production—yields to steam process, and for this reason it is not probable the reduction of sulphur by steam, as at present utilized, will become general.

By the calcinatory furnace and the Gill system, the fuel used being the crude sulphur, the cost is trifling; while fuel for steam reduction has to be shipped into the country at a great expense.

The system of reduction by the calcinatory furnace is the oldest known to the sulphur producer of Sicily. It is said to have been the original method employed at these mines centuries ago. Being simple in construction, furnishing its own fuel, and requiring little skill to operate, it bids fair to remain the favorite.

CHURCH HOWE,
Consul.

PALERMO, *April 10, 1899.*

AMERICAN WHEAT AT MALTA.

On January 14, 1899, I sent to the Department a report showing under what conditions American wheat might be accepted at Malta in lieu of Russian.* Since this report, the Mediterranean and New York Steamship Company's ship *Picqua*, from New York direct to Malta, arrived with a large cargo of wheat and flour. Unfortunately, the wheat sent was not up to the standard required for military use. I have received a fair sample of it and find it full of tares and unclean. The grains, also, are too small. This makes the second time that wheat from the United States has been received, and each time it was below the standard. I wish to state as a result of my recent investigations on the subject that, although there is every chance for our wheat to gain this market, no headway will be made with such qualities as have thus far been received. It is utterly useless for our shippers to send wheat that will not come up to the requirements. I know that we have the required article, and it only rests with those desiring to secure a market here to send large samples first and then, if accepted, to send wheat equal to the samples. I have sent to the Department of State for the benefit of those interested in the matter four samples

* Printed in CONSULAR REPORTS No. 224, p. 100.

of wheat.* One is a sample of the American wheat recently received here. This will not pass inspection and is not wanted. The second and third are, respectively, Russian "Taganrog" and "Katkof," both of which are at present in use here. The latter two barely pass inspection, but are accepted. The fourth sample is that of some English wheat recently imported in a small quantity. This wheat is very large in grain, is clean, and just what is required. An inspection of these samples will at once show what is wanted.

Wheat is taken at Malta at weight per quarter. The quarter is measured and then weighed and must average (1 in 25 bags) from 496 to 504 pounds to the quarter; the higher the better. Should it not reach 504 pounds, shortage is likely to be the result, and a deduction from the invoiced weight follows. In an invoice of 750 quarters delivered to the Government recently, 6 quarters were short in weight. This, of course, could not be charged for. Mr. Turnbull, of the firm of Turnbull, jr., & Somerville, located on Strada Reale, Valletta, recently said to me:

We have large dealings with the Government here and desire to secure an American brand of wheat that will be acceptable. We desire to do business with some responsible American firm that will send us samples of wheat up to the standard, and that will, if we order from them, send us wheat up to the sample. On our orders, the amount of the invoice of wheat would be remitted in full without any deduction of commissions, brokerage, or other charges. As all commissions are paid at Malta, the American exporter would get his quotation. Quotations should be c. i. f. Malta, freight paid in advance, and insurance against all risks, including risks of lightering, until the wheat is landed. Lighterage is paid here by the receiver. The whole order should arrive at once and be fossed, as the Government, while paying promptly, does not do so until the whole cargo is landed. When an order is sent by different vessels, the bill is not paid until the last arrives.

The military authorities are not at present buying much Taganrog wheat, but are using up stored material. Advantage should be taken of this condition of affairs by American dealers, and samples should be submitted at once. In sending samples, one thing must be strictly remembered, and that is not to send poor wheat. At Malta, the question is not cost, but quality. There are several good firms here that are ready to deal with our exporters. Among them are the firm above mentioned, C. Breed Eynaud & Co., and S. Scicluna & Son. The latter firm has for some time been trying to get some samples of American wheat of good quality, but thus far has not succeeded in securing what is most desired.

JOHN H. GROUT, Jr.,

MALTA, *March 28, 1899.*

Consul.

*The samples are filed for reference in the Bureau of Foreign Commerce. Portions will be sent to anyone wishing to inspect them. Sample lots have also been sent the Department of Agriculture with Advance Sheets of this report.

TRADE IN GIBRALTAR.

Since the beginning of the year, the importations of United States produce to this market have been on a very liberal scale, especially flour, American descriptions having so far completely ruled the market. Produce from other countries has not been able to compete, in consequence of the difference in cost. The supplies which arrived direct from New York during the past quarter amounted to 23,548 sacks. If the importation of cereal produce from abroad were not handicapped in Spain by heavy duties, there is no doubt that this market would become an important center for the entrance of American supplies. At the present moment, the demand for flour is limited to local consumption, but some of it finds its way to the neighboring Spanish villages in the shape of bread, through the several thousands of laborers daily engaged in the extensive dock and harbor works going on at this port.

It is yet too early to be able to form any opinion regarding the standing crops in the province of Andalusia; much has, however, been sown. The bean crop does not seem to promise much.

The trade in petroleum has for some time past been in the hands of four importers, who have also been long-established retailers in the article in this market. Owing to a combination among them, they succeeded in converting the business into almost a monopoly, raising prices to exorbitant figures; but a few outsiders having lately imported a small supply of the article to retail in this market, the competition has caused quite a decline in prices, which at present hardly permit of any margin.

During the past month, 18,190 cases of refined petroleum were imported direct from New York, the greater portion being for account of the combination. The want of facilities for the storing and handling of petroleum on shore and afloat, added to strict police and fortress restrictions, prevent speculation to any extent.

American lard has been in fair demand during the past months, the ruling prices being considerably under the price of Spanish supplies, which have for some time past been quite scarce, owing to the reduced number of hogs which were raised during the last year in the south of Spain. Imports from the United States come in wooden pails, and lately 2,000 pails were received direct from New York by steamships.

The tobacco market has lately been very inactive for outward traffic, but the local consumption continues to gradually lessen the

large stocks stored previous to the imposition of 1d. per pound duty last year. The direct arrivals from the United States during the present year have so far consisted of only 333 cases and 17 hogsheads of leaf tobacco and 175 cases of Cavendish.

A very extensive business continues to be carried on in American salted pork, hams, bacon, cheese, and every kind and description of canned provisions, vegetables, and fruits. These articles of daily consumption generally come through English ports—principally Liverpool—and in such quantities as to fully meet the demands, not only of this British colony and the shipping arriving at its port, but also of the Spanish neighborhood.

HORATIO J. SPRAGUE,

GIBRALTAR, *April 1, 1899.*

Consul.

EXPORT CONDITIONS IN AUSTRIA.

The depressed condition of the Austrian export trade, during several years past, has led the exporters of this Empire to serious discussion of ways and means to check the decline and restore this important branch of commerce to its former status.

THE COTTON-SPINNING INDUSTRY.

At a recent meeting of representatives of the cotton-spinning industry, the results for 1897—the last year for which full and accurate statistics had been prepared—were pronounced “inexpressibly” bad. In most cases, it was declared, the business was conducted at an absolute loss. The causes were said to be many, a prime one being the lack of unity among the spinners. The year 1896 closed with a very bad showing. Every operator realized that fact, and also the necessity of action to improve the condition of business. Each had his own idea of what ought to be done, but no concerted effort could be effected. Some of the firms worked in harmony, thereby checking in a degree the rapid decline in prices which had begun. But enough important concerns held aloof to seriously obstruct the efforts of the others; and so the year 1897 rounded up with a showing of only 3 per cent of the Austrian cotton-spinning product sold in foreign markets during the twelvemonth.

No official details for 1898 have yet been published, but during that year Austrian cotton spinners generally complained of dull business, and on the whole no improvement over 1897 could be perceived.

THE LINEN INDUSTRY.

A recent issue of *Flachs und Leinen*, a textile periodical, presents facts and figures regarding the Austrian linen industry for 1898. The statistics cover the first nine months, and comparison is made with the corresponding months of 1897. The past year is shown to have been unfavorable, both absolutely and relatively. The exports decreased, the total value being 11,712,356 florins (\$4,755,216), as against 11,981,877 florins (\$4,864,642) for 1897. On the other hand, imports of linen goods increased, rising from 8,325,845 florins (\$3,380,293) in 1897 to 10,777,881 florins (\$4,375,819) in 1898.

The blame for this unfavorable condition is laid almost wholly to the poor flax crop and to the steady diminution of flax culture in this country. The quantity of the home product decreased 25 per cent, while the amount of flax imported increased 40 per cent. The increase in value of imported flax was 2,000,000 florins (\$812,000), which is reckoned as that much dead loss to the rural population of Austria-Hungary in 1898.

Among other causes of depression are cited reduction of prices, continual loss of trade territory, sharp competition, unfair methods of other textile industries to crowd out linen goods, and various domestic burdens of taxes, insurance, production regulations, and the like.

Half the linen product of Austria is consumed at home; the other half goes to foreign markets. The home market, it is said, is embarrassed by the present unsettled state of the Empire, the *Ausgleich* controversy with Hungary, and the lack of sufficient legislative protection and encouragement of the industry. The foreign markets are made constantly more difficult of access through increased import duties and the establishment of linen factories in other countries. From no point of view, therefore, does there seem to be an outlook favorable to the Austrian linen makers.

A large part of the domestic sale of Austrian linen is in Hungary. The present attitude of that Kingdom gives the linen makers serious concern. Hungarian leaders of public sentiment do not hesitate to declare that the *Ausgleich* (the reciprocal arrangement between Austria and Hungary, one provision of which is that the products of both shall be interchanged free of duty) will be renewed only until 1902. From that year, it is intimated, Hungary will act under a customs law of its own, whereby a duty will be imposed on the importation of Austrian as well as other foreign products. Coincident with this change, Hungary will offer special encouragement and inducements to the establishment of factories within its borders. Now, it has practically none, being essentially an agricultural country.

Grave fears are entertained by Austrian manufacturers as to the results of such a policy. It may not be carried out, but the possibility tends to restrict improvements and extensions in Austrian factories.

PLANS TO IMPROVE THE EXPORT TRADE.

In view of present adverse conditions and threatening prospects, Austrian exporters are strengthening and solidifying the association which they have for years maintained, and are seeking substantial cooperation from the Government. The Ministry of Commerce has prepared a series of suggestions, which were laid before a conference of exporters on the 8th of this month. The document presents food for thought to American exporters, as well as to those for whose benefit it is specially intended, as will appear from the following summary of its principal points:

(1) It is proposed that technical experts be sent to foreign countries, to such places as themselves export the class of articles which the experts specially represent. Each expert must first demonstrate the necessary knowledge of languages and of the wares he is to represent, and must devote a certain time to studying the home manufacture of the article with which he is specially concerned.

(2) Each expert will receive from the Austrian Government for the first year of his service abroad 5,000 to 8,000 florins (\$2,000 to \$3,200), according to the expense to which he is subjected. He must during this year study the conditions and possibilities of each place, introduce the goods which he specially represents, and eventually procure and send orders to Austria.

(3) The expert will receive from the principal whom he represents such additional compensation for business he creates and concludes as may be agreed on by contract between them.

(4) For the second year, if his service prove useful, the expert representative will receive from the Government an additional sum of 3,000 to 4,000 florins (\$1,200 to \$1,600).

(5) The Ministry of Commerce will bind every representative by a contract, in which the details of his work are set forth. His attention must be devoted exclusively to the Austrian export trade.

(6) The business connection between the representatives and the Austrian industries shall be such as to insure direct communication with both individual firms and export syndicates. These syndicates, unions of various individual concerns, are for the purpose of gaining strength by harmony of action, of improving the credit of the firms belonging thereto, of preventing ruinous competition, and of aiding in the enlargement of the productive force of those firms. The Government will relieve these syndicates of all taxes in their export business.

(7) The business relations between exporter and representative abroad will be promoted through the medium of a home financial institution. It is to be insured against loss by elaborate provisions respecting the securities required for the use of its money.

The Minister of Commerce has submitted his plan to the various chambers of commerce in Austria, together with a separate document containing an earnest appeal for united and vigorous action on the part of all concerned to repair mistakes that may have been made and to open new avenues through which to push Austrian products.

OPPOSITION TO THE GOVERNMENT PLAN.

Unfortunately, the proposition of the Government encounters opposition from the Austrian industries. At the present writing, that opposition seems to be unanimous. A circular has been issued and widely distributed by the Central Union of Austrian Industries, of which practically all the large factories and exporters of the Empire are members, declaring that the Government plan of export promotion is materially different from that contemplated by the association of exporters; and that the Government sprung its plan with suddenness, which indicated a purpose rather to thwart the aims of the association than to open new avenues of foreign trade. The circular refers to the fact that the Government has appropriated 250,000 florins (\$100,000) for export purposes, and declares it reasonable to believe that this sum will find its way into the pockets of politically favored exporters.

Influential newspapers join the exporters in opposing the Government plan. In some quarters, the race antipathy crops out, manifesting itself in insinuations that the Government is truckling to the Tschechs and Poles, to the detriment of the German element. There is no visible ground for such an assumption; but it serves to show how, on every possible occasion, the race question comes forward in Austria. The most valid objection to the Government plan, and the one entertained by exporters generally, is that it contemplates bureaucratic control and active management of export transactions. This, the exporters say, is both undesirable and impracticable. They claim that officials and clerks in the Ministry of Commerce can not be informed, as they and their employees are, concerning the best methods to be adopted in the export trade, and that, consequently, the direction and control should be solely in the hands of the export association. But the exporters are anxious for Government aid. The appropriation of 250,000 florins they consider wholly inadequate, and regard 5,000,000 florins (\$2,000,000) as none too large an annual sum to carry out their plans.

The generally accepted idea of what should be done includes the establishment of commercial houses in charge of skilled and energetic young business men in China, India, Egypt, South Africa, Asia Minor, and Japan, and in the United States one at an interior central point like Chicago and another on the eastern seaboard. It is said that such a house in Singapore is already assured. Each of the men in charge of these missions must contract to remain there a period of years, and must understand the language there spoken and have a thorough knowledge of the wares the export of which he is to promote. The Government proposition essentially covers this plan, excepting in its provision for Government control.

The antagonism of purpose between Government and exporters may prevent action from any quarter. Pessimists say it will. Optimists are confident that compromise will eventually clear away all difficulties. The long-continued depression has driven many exporters almost to desperation. On this fact, if on nothing else, can be founded an expectation that something will be done. The case is one of dire necessity.

Among the generally discussed means of advancing Austria's export trade is that of securing colonial possessions. According to report, the Government is already looking toward the Orient with that end in view. An Austrian war ship sailed this week from Trieste, and it is rumored that she is bound for a Chinese port on a mission connected with the promotion of the export trade.

FRANK W. MAHIN,
Consul.

REICHENBERG, *March 25, 1899.*

THE VIENNA EXPORT ACADEMY.

Since the 1st of October, 1898, there has existed in Vienna a commercial school of an entirely original organization. This is primarily shown from the fact that the institution is directed by a high official of the Austrian Ministry of Commerce. This direction is not merely nominal, but is evidenced, apart from daily influence on the life of the pupils, by weekly conferences under the chairmanship of the director himself, which have the purpose of receiving from each of the teachers a report of the studies of the past week and those to be taken up in the coming one. Every topic, even in its smallest details, is in direct relation to the object of the institution. This object is the promotion of the Austrian export trade. No serious patron of the academy wishes that the young men, immediately after finishing their studies, should become Austrian exporters. On

the contrary—and this is the second original phase of the scheme—it is desired that the graduates, on leaving the academy, act as clerks in exporting and manufacturing firms, there to learn the practice of some special branch of business, whereupon, under further support of the Ministry of Commerce, the graduates are to be placed with larger foreign firms; and finally, by joint protection of the Austrian Government, the chambers of commerce, and the particular foreign consulate concerned, they will be aided to establish themselves abroad.

One hears constantly the complaint of Austrian exporters of the sad lack of national commercial representation abroad. It is much more difficult for an Austrian exporter to find in India, China, or South America a market or bank for Austrian wares or drafts than it is for the German merchant, who is naturally preferred by the German firms in foreign countries. Austrian merchants are rarely to be found, even in the most important cities of other lands. This state of things it is now proposed to remedy, by educating ambitious and gifted young men in all the branches necessary for the future exporter to know, and inducing them to adopt such career by the certain prospect of aid from the Austrian Government.

The academy has a preparatory course of one year and a regular course of two years. Further, there are special courses of greater or less duration. The tuition fee is 150 florins (\$60) a year. The pupils will, besides, be given opportunity to visit occasionally, under the supervision of thoroughly informed teachers as guides, the prominent industrial establishments of all typical export articles, as well as certain commercial cities and ports of special importance. Thus, for instance, an excursion to Hamburg is now planned, while trips to mills, sugar refineries, breweries, and furniture factories have already been undertaken.

The Imperial Royal Commercial Museum, of which the export academy has been made an integral part, has put at the disposition of the academy its library, its valuable trade collections, and the requisite geographical maps and apparatus. The academy has a yearly subvention from the Ministry of Commerce of 20,000 florins (\$8,000), and a like sum is being raised by popular subscription.

First of all, graduates of the higher commercial schools are entered as regular students in the academy. Further, pupils are admitted who have passed the grammar schools and possess such knowledge of commercial branches and of the French and English languages as can be acquired in a commercial school of two classes.

All desiring to be admitted as regular students must pass a preliminary examination. In exceptional cases, pupils who have completed their studies in an unusually excellent manner in a commercial

school, and can show testimony of already having done praiseworthy work of a practical kind, may be admitted as regular students by the faculty without preliminary examination. This rule of exception has already been applied in many instances, and gives the academy some of its most promising pupils. Two groups of students can be plainly distinguished—those with and those without practical experience. The academy would perhaps attain its highest plane if only students who have had practical experience were admitted.

In no class of the academy are more than thirty students admitted, and only twenty in the preparatory course. The actual number of pupils at present is near the maximum allowed.

Attendance at the classes and lectures of the export academy is compulsory and subject to strict supervision. An absence of eight days without proper justification is followed by striking off the student's name from the roll. This is another distinguishing feature of the school, wherein it differs from all other Austrian and German high schools and recalls the Paris *Ecole des hautes Études*, as well as French schools in general.

At Christmas and Easter, during every year, oral examinations are held in all the branches of study. During the first year, the annual examination takes place in the first half of July.

By reason of a special order of examination, the regular students have to undergo a severe final examination at the close of the second year before a board of examiners presided over by a representative of the Ministry of Commerce. The names of students who do not pass one oral examination without good excuse are stricken from the rolls. In some cases, the board of examiners may permit the repetition of a year's course, or of the severe final examination.

Only those students are admitted to the second year who have favorably passed the annual examination in all branches of the first year's course.

There are thirty-four hours weekly in the preparatory course, and in the first year thirty-four or thirty-five obligatory hours every week, besides some that are not obligatory. The preparatory course has for its purpose to advance graduates of gymnasia and "real" schools about as far in one year as an ordinary commercial school does the undergraduate in two or three years.

Of the two yearly courses of the academy, only the first has so far been opened, and the students have in all the examinations up to now given brilliant evidence of the excellent curriculum. In this course, great stress is laid on the study of the French and English languages, with practice in correspondence (six hours each weekly). Four hours a week are devoted to domestic and foreign law, so far as it concerns commerce. Three hours are given to practical exercises

in the office work of export, import, and factory businesses. Instruction in this important branch is intrusted to the vice-director of the academy. The limited time given to this work, "muster comptoir," is only the natural consequence of the fact that all students must be familiar with the principles of office work before their admission.

In view of the burden entailed by the large number of school hours, home time is demanded only for languages and office lessons. Instruction in economics, with special regard to tariffs, in the usages of export trade, in commercial geography, and in knowledge of the world's wares according to kind and production is imparted in so-called seminaries—that is, institutions which afford immediate practice of what has been learned from the teacher's lecture, and, as far as possible, actual inspection of the modes of production and of samples. This experiment of giving the pupil the most important facts right in the school, instead of letting him learn by heart what he is sure to forget speedily, and to have him practice it on the spot until indelibly engraved on his memory, is one of the most daring as well as important innovations in the field of pedagogics, and deserves to be propagated.

Besides all this, lectures on selected subjects of actual interest are given by the professors of the export academy, by manufacturers in the various industries, and by ministerial officials, and are attended voluntarily by the students, who display deep interest in them. In this manner, they become acquainted with special questions of the day that are engrossing public interest, in a manner that is unbiased by party standpoints.

I had the pleasure of observing the practical working of this feature of the academy, in a lecture which was a comprehensive description of the world's commercial institutions devoted to the export trade. The lecturer spoke, in particular, with great admiration and thorough knowledge of the Philadelphia Commercial Museum and the National Association of Manufacturers, as well as of our other export associations. About the lecture room was displayed printed matter bearing on the subject. In the American exhibit, I noticed a copy of the tariff, consular invoice certificates, CONSULAR REPORTS, the newly issued American Trade Index of the National Association, a copy of American Trade, and a number of other publications.

This export academy should be of special interest for us in the United States. The addition of a similar school to the excellent means for information at the command of the Commercial Museum in Philadelphia might cause young men to be of great use in our export trade and achieve even better results than the academy here,

which is proving so practical a measure. Such a school would be of untold benefit to our national commerce, if attended for a year by men about to enter our consular service. It would be an ideal consular training academy.

VIENNA, *April 18, 1899.*

CARL BAILEY HURST,
Consul-General.

FIG CULTIVATION IN GREECE.

American fruit growers have informed me that in certain portions of the United States they have succeeded in raising fig trees of healthy appearance, which bear an abundance of fruit; but that, for some reason unknown to them, the figs do not mature so that they can be dried and packed for the market. I have made inquiries in regard to the Greek method of fig culture, and a well-informed resident of Athens, Mr. George Nicolaides, has favored me with the following paper on the subject.

While waiting for wild fig trees to grow and bear in the United States, growers might profit by importing the wild fig and fastening it to their trees at ripening time.

ATHENS, *April 20, 1899.*

DANIEL E. MCGINLEY,
Consul.

FIG CULTURE.

Wild fig trees are found both in Greece and in Asia Minor. The fig tree which produces the famous sweet fruit was well known in ancient Greece, and very probably was cultivated in the same manner as at present. Herodotus says:

"In the plain of Babylon, one finds date trees everywhere, the majority of which produce fruit; and these trees are cultivated in the same way as the fig trees are cultivated in Greece, viz, by hanging on the trees bearing edible dates the fruit of the date trees of the masculine kind, as the Greeks say, which trees do not produce dates, so that the insect which comes out of the fruit of the masculine tree may inoculate the fruit of the tree bearing dates, and thus prevent it from falling before ripening."

In all parts of Greece where figs are grown, from May to June the cultivator tries to procure fruit from the wild fig tree. Last year, the wild fig trees of Smyrna not producing a sufficient quantity for local needs, the proprietors of plantations were obliged to buy the necessary fruit from the isles of the Greek archipelago and even from Crete, paying a very high price.

Wild figs are ill shaped, rather hard, and dry. They are strung in bunches of ten on a piece of strong cord or rope, and are fastened on the sweet-fig trees.

This method is not universally adopted. In Tuscany, for instance, it is never employed. Perhaps, the wild fig trees there multiply to such an extent that the insects can pass to the other trees unaided. On the other hand, a practice followed

with persistence for more than twenty-five centuries ought not to be disregarded. The opinion that the wild fig tree may by cultivation be made to produce edible fruit is erroneous. In Greece, this tree has existed during centuries in proximity to cultivated fig trees, but has not in the least changed its nature.

It would seem advisable to introduce the wild fig tree into California, and to try the method in vogue here.

SMOKE CONSUMPTION AND ECONOMY OF FUEL.

Industrial economists in Germany are just now greatly interested in the development of an invention which promises to solve more effectively than has been done hitherto the problem of consuming bituminous coal; slack, sawdust, and other inferior forms of fuel without smoke and under conditions of extreme economy. This is the process of Mr. Paul Cornelius for the consumption of low-grade fuels, patent No. 100437 in Germany and No. 613359 in the United States, although the practical process has been greatly modified and improved since the original patents were issued.

The process consists simply in distributing heated and slightly compressed air through hollow grate bars to the whole lower surface of the furnace, which, being injected upward through the mass of burning fuel, secures equal and perfect combustion and an intense, regular heat from materials that would not be available if burned by ordinary methods. This system has been in practical use since September last at the works of Messrs. Reissner, Wahl & Co., manufacturers of cloth at Guben in this district, and since December last at a large hotel in Berlin, where a steam engine supplied by two boilers is kept in service to drive a dynamo that generates electric current for lighting purposes, elevator, etc.

In view of the extraordinary interest which attaches to this subject and its prospective importance in abating the smoke nuisance in cities and bringing into use vast quantities of material which are now practically worthless, I have visited the installation in Berlin, and this is what was there exhibited:

The two boilers are of the ordinary flue pattern, placed side by side and their furnaces separated by a dividing wall, so that one can be thrown out of use or turned on, as occasion may require. The furnaces are about 10 by 4 feet in area and the smoke passes by subterranean flues to a stack chimney standing in a central court and rising above the roof of the building. Near the furnaces is located an ordinary fan blower, driven by an electrical motor of one-half horsepower, the speed of which is easily controlled and which drives the air through a 6-inch pipe into a hollow iron chamber about 10 inches deep, which forms the front section of the hearth of the fur-

naces. Into this air chamber is fitted one end of the hollow grate bars, which are about $2\frac{1}{2}$ inches in diameter, extend backward the length of the furnace, and are supported by ordinary bearings at the farther end. These hollow grate bars are round on the bottom, but at the top are hexagonal, presenting three faces, each pierced with holes about 2 inches apart and beginning with a caliber of one-eighth inch, which increases slightly throughout the length of the bar, to equalize the discharge of air from the gradually decreasing pressure within. The hollow grate bars are laid about 6 inches apart, and there is placed between each pair three solid triangular bars, which assist in sustaining the weight of the burning fuel. The air being forced by the fan blower into the hollow chamber, is there heated from the fire on its upper surface, then passes into the hollow grate bars and is injected upward in three rows of jets, one vertical and two inclined to right and left, so that the entire under surface of the burning mass resting on the grate is fed constantly by jets of fresh-heated air, which generate from the most ordinary grades of fuel an intense white heat, which can be perfectly controlled by regulating the speed of the fan blower and produce a combustion so natural and perfect that the smoke is entirely consumed.

At the time of my visit, the fuel in use was what is known as "Coaksgries," or coke dust, the fine slack that comes from screening gas coke, the scrapings of retorts, etc., which has hitherto been regarded as worthless, except for ballasting roads and footpaths. The bed of burning fuel was maintained over the surface of the grate about 5 inches deep, and the fire was white, intense, and evenly distributed. The air current being stopped, the fire at once dropped to a reddish tinge and began to smoke.

Mr. Cornelius' original invention contemplated reinforcing the combustion by impregnating the injected air with a small proportion of cheap oil gas; but experience soon taught that pure heated air was quite sufficient, and, further, that the air chamber, instead of being located at the front end of the furnace, should be at the rear or farther end from the door, where the heat is most intense and whence the current in the grate bars is injected forward—that is, in a direction opposite to the draft of the furnace itself. The hollow grate bars are of cast iron, made in sections about 3 feet in length, with pierced flanges which enable them to be bolted together at the ends, so that the bar may be lengthened to fit any furnace. Being protected by the current of air, the bars are practically indestructible by fire; those in use since September being still in good condition.

With an apparatus so simple and natural in principle as this, some surprising results have been already obtained, although the practical application of the process is in its infancy. The proprietor of

the hotel, who has had the apparatus in use since December, gives it the highest approval, stating deliberately in his certificate that it has reduced by three-fourths his outlay for fuel, worked with efficiency at all times, and completely eliminated the smoke and soot which formerly, when the best Silesian lump coal was used, blackened the walls and floor of the hotel court and formed a nuisance of which his guests frequently complained. It was in fact for the purpose of abating the smoke and soot plague, rather than of saving expense of fuel, that the system was adopted for trial. The coke dust used as fuel contains a high percentage of inorganic matter and the yield of ashes is thereby necessarily increased; but, all elements duly considered—cost of fuel, labor of removing ashes, etc.—the fuel cost of running the engine, month by month, as compared with the previous year, has been less than one-fourth of the fuel cost for the same boiler, engine, and electric current, generated with Silesian lump coal.

At the cloth works in Guben, the problem was somewhat different: (1) To get rid of the smoke and soot which poured from the furnace chimney and defiled the premises, and (2) to use as fuel a kind of brown coal found in large abundance near the factory, which contains about 2,400 calorics, and is therefore a fuel of too low a grade to be used by ordinary means. For this reason, the market price of this brown coal delivered at the factory was only 6 cents per centner, or \$1.20 per metric ton (2,200 pounds)—a very cheap fuel, indeed, for Germany—but with the Cornelius grate bars it was so absolutely smokeless and otherwise so satisfactory that after three weeks' experience with one boiler, the managers had their three boiler furnaces converted to the new system, and after eight months' constant use certify that—

(1) Their saving in fuel by the use of brown coal, instead of Silesian steam coal, has been 110 marks (\$26.18) per week.

(2) The smoke and soot from which they previously suffered have been entirely suppressed.

(3) The grate bars remain in as good condition as when first used, and the fire burns easily and under perfect control, so that no injury has resulted to boilers or furnace walls.

Exhaustive tests of the new system have been made by Mr. Gustav Dürr, directing engineer of a large tubular boiler factory at Düsseldorf, who writes in most convincing terms, declaring that the Cornelius system of furnace construction will bring into use as fuel for steam and many other heating purposes, not only the vast product of coke dust from the Westphalian coal and iron district, which has hitherto been used for road making and ballast for railway tracks, but also the immense brown coal and peat deposits of

Germany. This, in many manufacturing districts of this country, will revolutionize the whole economy of heating for steam and other purposes, and German economists are already counting upon the sudden advantage that this new method will give to certain of their industries, which now have to use expensive coal brought from long distances.

Another series of tests, extending over a period of six weeks, has just been made in Berlin by M. Ternberg, chief engineer of the Government of Sweden, as a result of which negotiations are now in progress for the sale of the Cornelius Swedish patents to the Government of that country, in order to enable the people to utilize the vast deposits of peat, which cover thousands of square miles in Scandinavia, where little or no coal exists and almost the entire supply has to be imported from Great Britain.

From the standpoint of general utility, the advantages which seem to have been secured by this system, and which will render it important to the United States, may be summarized as follows:

(1) The smokeless consumption of bituminous slack and other waste of mines and coke works in cities and towns.

(2) The use for steam and heating purposes of the lowest grades of western bituminous coals, peat, sawdust, etc., and the vast mounds of anthracite waste that now encumber the mining districts of Pennsylvania.

(3) In naval vessels, notably torpedo boats, to secure such complete consumption of bituminous fuel as to eliminate smoke, which serves to indicate the presence and location of a war vessel to an enemy.

It will be understood that while any fuel—lump or nut coal, for instance—burns fiercely on a Cornelius grate, perfect combustion with consumption of smoke gases requires the fuel to be pulverized, so that for naval purposes lump coal would have to be crushed in order to secure the best results.

FRANK H. MASON,
Consul-General.

BERLIN, *April 25, 1899.*

SLATE IN BELGIUM.

In reply to a Pennsylvania correspondent (to whom the original letter has been forwarded), Consul Le Bert writes from Ghent, April 25, 1899, in part as follows:

In this district, which comprises East and West Flanders, slate is not manufactured for any purpose and is used only for roofing. All public buildings—Government, municipal, churches, theaters, schools, etc.—have for the past twenty-five years been roofed with

slate. Its use on stores, residences, etc., does not date back quite that far. It is only within the past eight years that it has been generally employed, and it is now rapidly gaining favor as a roofing material. To-day, few buildings of the better class are constructed without slate roofs. Wood shingles are unknown; the prevailing material has been clay tiling. This is very cheap, and the poorer classes of buildings will probably be roofed with tiling for many years.

Slate blackboards are little used; wooden boards appear to give satisfaction. Slate mantels are unknown; granite and marble are said to be cheaper, more durable, and capable of better finish. Slate floor tiles are not used. School slates are manufactured in Belgium, and are also imported from Germany.

The following tables will show the trade in slate in 1897, the latest year for which statistics are available:

Importation of roofing slate, 1897.

Country.	Pieces.	Value.
England	338,700	\$1,372.81
France.....	37,251,683	150,981.01
Grand Duchy of Luxemburg.....	1,105,400	4,480.10
Other countries.....	57,725	234.11
Total	38,753,508	157,068.03

Exportation of roofing slate, 1897.

Country.	Pieces.	Value.
Germany	8,894,620	\$68,666.50
England	373,885	2,886.31
Austria.....	71,000	548.12
France.....	670,250	5,174.33
Grand Duchy of Luxemburg.....	4,307,870	33,256.79
Holland.....	668,346	5,159.66
Switzerland.....	2,024,570	15,629.53
Other countries.....	293,020	2,262.15
Total	17,303,561	133,583.34

Production of slate in Belgium.

Locality.	1897.			1896.	
	Pieces.	In cubic meters (35.316 cubic feet).	Value.	Pieces.	Value.
Namur.....	4,740,000		\$319,279.90	35,980,000	\$255,242.50
Luxemburg	36,682,000		4,747.80	1,150	4,825.00
Do		1,445			
Total.....	41,422,000	1,445	324,027.70	35,981,150	260,067.50

Recapitulation of roofing slate imported, exported, and produced for the year 1897.

Description.	Pieces.	Value.
Importation.....	38,753,508	\$157,068.03
Production	41,422,000	319,279.90
Total.....	80,175,508	476,347.93
Less exportation.....	17,303,561	133,583.39
Surplus	62,871,947	342,764.54

The duty on slate is 77 cents per 1,000 pieces. Prices obtained by contractors are from 67.55 to 86.85 cents per square meter (10.76 square feet), according to quality, laid on roof.

The principal dealers in slate in Ghent are: P. Van den Heede, rue Basse No. 20; F. De Bruyn, Ledeborg; G. Casteleyn, Digue des Blanchisseurs No. 10.

SLATE INDUSTRY IN FRANCE.

In reply to a Pennsylvania firm,* Consul-General Gowdy, of Paris, writes, on April 11, 1899:

Slate is produced in France to a very large extent and is taken from both open and closed quarries. The best of these quarries are located in the neighborhood of Anger, Department of Maine et Loire. The slate extracted is principally used for roofing tiles; from certain quarries, for large slabs, billiard tables, and public toilet rooms.

Under the present conditions, the French tariff on slate coming from the United States is: For slabs and tables (broken or sawn) in the rough or polished, 4 francs (77 cents) per 100 kilograms (220 pounds) gross; for roofing, 1.40 francs (27 cents) per 100 kilograms gross; for framed school slates and for drawing, 5 francs (96 cents) per 100 kilograms.

I give herewith a table of statistics of exports and imports for 1897, being the last official figures on the subject. The terms "special" and "general" mean special commerce and general commerce, defined as follows:

In imports, general commerce includes all merchandise of this nature entering France from foreign countries or colonies, whether by land or by sea, and whether intended for consumption in France or for reexportation or transmission to other countries. Special commerce means all merchandise of this nature subject to duty withdrawn during the year for consumption from the entrepôt (or

* To whom Advance Sheets have been sent.

warehouse) on payment of duty. In the line of exports, general commerce includes merchandise of every description, whether of foreign or domestic origin, exported from France. The term "special commerce" embraces only merchandise of national origin and that of foreign origin which has been admitted free of duty or has been nationalized by the payment of duties.

Exports.

Description.	Quantity.	Value.	
	<i>Met. quint.*</i>	<i>Francs.</i>	
Building slabs and tables:			
General	869	19,118	\$3,689
Special	861	18,942	3,655
Total	1,730	38,060	7,344
Roofing:			
General	485,182	4,124,046	795,740
Special	477,357	4,057,532	783,103
Total	962,539	8,181,578	1,579,043
Framed school and drawing slates:			
General	9,731	194,630	37,567
Special	9,318	186,361	35,967
Total	19,049	380,991	73,530

* 1 metrical quintal = 2,204.6 pounds.

Imports.

Description.	Quantity.	Value.	
	<i>Met. quint.</i>	<i>Francs.</i>	
Building (rough):			
General	2,175	10,875	\$2,098
Special	2,057	10,285	1,985
Total	*4,232	21,160	4,083
Slabs and tables:			
General	6,385	127,702	24,646
Special	5,595	111,896	21,595
Total	† 11,980	239,598	46,241
Roofing:			
General	18,988	161,402	31,150
Special	11,163	94,888	18,303
Total	‡ 30,151	256,290	49,453
Framed school and drawing slates:			
General	1,775	35,506	6,852
Special	1,418	28,357	5,473
Total	§ 3,193	63,863	12,325

* Belgium supplies 954 metric quintals; Italy, 1,207.

† Italy supplies 5,336 metric quintals; Germany, 215; England, 214; Belgium, 169; United States, 161.

‡ From England and Belgium.

§ From Germany and Switzerland.

NO. 226—7.

USE OF PHOSPHORUS IN MATCHES.

Ambassador Choate sends from London, under date of March 18, 1899, copy of a recent blue book embodying reports on the use of phosphorus in matches, together with an article bearing thereon from the London Times of March 17, 1899. The latter reads:

A blue book issued yesterday contains the reports of Professor Thorpe, Professor Oliver, and Dr. Cunningham upon the use of phosphorus in the manufacture of matches, together with a digest in the form of an introductory memorandum by Mr. Whitelegge, the chief inspector of factories. The reports contain many interesting details concerning legislation in other countries where attention has been called to the danger of phosphorus poisoning, and also concerning the methods in use elsewhere for averting these dangers and reducing by the use of machinery the number of human beings exposed to phosphorus vapor or the products of phosphorus oxidation. But, while they will supply the Home Secretary with an authoritative basis for legislation, it can not be said that they materially add to or modify what may be called common knowledge concerning the poisonous action of ordinary phosphorus, the part it plays in the manufacture of matches, or the direction in which improvement of factory conditions must be attempted. Phosphorus is one of the elements which, like sulphur and carbon, are capable of assuming more than one form, marked by widely dissimilar physical properties. Its allotropic modification, known as red phosphorus, is as difficult to identify with its ordinary form as is carbon flashing in a lady's diamonds with carbon showered upon the unfortunate population of London in the shape of "blacks." Ordinary phosphorus is highly poisonous, is inflammable at a temperature far below that of boiling water and at the ordinary temperature of a room if exposed to the slightest friction, and gives off poisonous fumes at ordinary temperatures when in contact with air containing any moisture. Red phosphorus is not poisonous even in large quantities, and gives off no fumes in ordinary conditions, but unfortunately requires a relatively high temperature to bring about ignition. It is used in the manufacture of matches that strike only on the box, or, rather, it is an ingredient of the prepared surface on which they strike; but no means have yet been discovered of using it to replace white phosphorus in matches meant to strike anywhere. However convenient safety matches may be in our homes, where the appropriate striking surface is always at hand, there are obviously a great many situations in which a match that strikes anywhere is incomparably more convenient. Hence, the ordinary phosphorus occupies a large place in match manufacture which the red variety can not fill in the present state of our knowledge and invention. How large that place is may be judged from the fact that some 60 tons of white phosphorus are annually used in making matches, while the consumption of red phosphorus is under 4 tons. As matches are exported in large quantities, it is obvious that undue interference with the use of the poisonous, but convenient, variety would deprive the country of a valuable trade and throw large numbers of people out of employment.

Happily, there is no need to resort to heroic measures, since there are no dangers connected with the use of white phosphorus which can not be met by the use of common-sense precautions. The stuff gives off fumes which are injurious to the health of susceptible subjects, though they are far from producing the general havoc which some suppose them to cause. It follows that precautions should be taken to carry off these fumes by ventilation of a specially thorough kind, and

also to prevent or limit their production by the use of substances, like turpentine, which hinder oxidation of the phosphorus. Oxidation, again, goes on only in the presence of moisture, even pure oxygen failing to combine with phosphorus when perfectly dry. From this, we may infer that every effort should be made to dry the matches thoroughly as soon as they are dipped; and, further, that the dipping ought to be done by machinery in closed chambers. There is already machinery for the purpose, and there is no doubt at all that ingenuity enough exists to improve it to any required point. Then, ignition of matches in the process of manufacture, of course, produces fumes in vast volume, and such ignition very commonly occurs in the crosscutting of double-ended matches. That crosscutting in this country is largely done by means of pivoted knives worked by hand. There is no reason why it should not be effected by machinery, or avoided altogether by invention of improved methods of single-end dipping. In these and other ways, the production of phosphorus fumes and the actual handling of phosphorus paste by the work people might be very greatly reduced.

It remains to deal with the work people themselves—perhaps the hardest part of the task. Decayed teeth are held to increase indefinitely the risks of phosphorus poisoning. Some say there is no poisoning without them; but that is probably putting the thing too high, because it is quite easy to poison a man with phosphorus in the form of pills, which can not affect him through his teeth. In any case, carious teeth either open a way for the poisonous action of the fumes or they indicate a condition of body in which these fumes are peculiarly dangerous. It follows that every effort should be made to exclude persons having unsound teeth. Work people can rarely be got to understand the importance of cleanliness, and, whether they work in phosphorus or in lead, they will insist, unless sharply looked after, upon eating their food with unwashed hands. The remedies for this are obvious. All the indicated precautions are of quite a simple kind and could be carried out without appreciable cost, and, in some cases, with actual gain in new factories. They will, no doubt, bear rather hardly upon the owners of old and badly constructed factories, but that is a thing which we can not help. A bill drawn up upon the lines of these reports would promote the survival of the fittest among match manufacturers, and also the introduction of improved methods which in the long run would cheapen production, while guarding the health of the community.

WOOD SEASONING BY ELECTRICITY.

In a recent issue of a European trade journal, there is a description of a new process of seasoning wood and timber by electricity, known as the Nodon-Bretoneau process, which must be a commercial success, for it is claimed that the company's shares are now at a premium of nearly 600 per cent. The effect of the electrical treatment seems to be to expel the sap and replace it by insoluble matter which will not putrefy, and to increase the tenacity of the wood and its resistance to vertical compression.

This is said to be the first industrial application of the principle of electric osmose, viz, if the electrodes in an electrolytic solution are separated by a porous partition and a current passes, the volume of the liquid in contact with the positive pole diminishes, while that in contact with the negative pole increases.

The process is about as follows: The positive pole of a dynamo is connected with a lead grating, upon which the wood to be treated is placed. A solution, which is kept at the uniform temperature of 100° F. by means of a steam pipe underneath the grating, is poured into the vat so as to almost cover the log of wood treated. At a public demonstration, the solution used contained 10 per cent of borax, 5 per cent of resin, and three-fourths of 1 per cent of carbonate of soda, the borax being used on account of its antiseptic properties and the carbonate of soda to help dissolve the resin. A porous tray, the bottom of which consists of two sheets of canvas with a sheet of felt between, is placed over the log, and a sheet of lead connected with the negative pole of the dynamo is placed above this.

When the current is turned on, the solution is drawn from the bottom and the sap is driven out, and its place taken by the borax and resin; the time required for a 10-inch log is about seven or eight hours, and then the wood is slowly dried, which takes in the open air in summer several weeks or even months. It was stated that a unit of electrical energy was required for every 6 cubic feet of timber treated.

E. THEOPHILUS LIEFELD,

FREIBURG, *April 7, 1899.*

Consul.

THE STUDY OF TROPICAL DISEASES IN GREAT BRITAIN.

A movement has recently been started in England for the special study of tropical diseases, and, now that it has developed into concrete form, there is an endeavor to give it an international character. The originator of this humane project is the Hon. Joseph Chamberlain, the British Colonial Secretary. The advancement of commerce with tropical regions, particularly Africa, has brought civilization face to face with diseases peculiar to those countries, which science has so far not been able to successfully combat, first, because of lack of exact knowledge as to their nature and, second, because of the inadequacy of the remedial agencies employed. These diseases are of a malarial type, but it has been found that they differ somewhat from those known as belonging to that class in Europe and in North America, although to a certain extent they are similar to the malarial diseases existing in the swampy districts in several of the Southern States.

There are now two organizations in England that have taken up the work of the study of tropical diseases, one at London and one at Liverpool. The Colonial Nursing Association, of London, has also

identified itself with the movement. The organization at Liverpool is independent of governmental control and has not as yet received any financial aid from the Government, while that at London is, to a certain extent, under Government auspices. The Liverpool school was started by the head of a large shipping firm, and the project has received the enthusiastic support of the local business community and medical profession. Both the London and Liverpool institutions are working together harmoniously for the same end, and it is confidently expected that the Liverpool enterprise will be given Government support. It is claimed that no other city offers such facilities as Liverpool does for the study of tropical diseases, largely because of the fact that, owing to its enormous traffic with the Tropics, there are more cases of these diseases here than in any other European city. Last year, there were in one of the Liverpool hospitals (the Royal Southern) nearly three hundred cases of malaria, and quite a number of cases of beriberi, tropical anæmia, yellow fever, scurvy, etc. All these cases were brought to Liverpool by ships trading with tropical countries.

The Liverpool School of Tropical Diseases is in connection with University College and the Royal Southern Hospital. Students must be qualified medical men of this or foreign countries, or fifth-year students. In other circumstances, special application must be made. A separate ward has been set apart at the hospital for the treatment of tropical diseases, and there is a ward laboratory for the immediate examination of blood and excreta. At the University College there are the Thompson-Yates laboratories, opened by Lord Lister last October, and probably the most complete in the United Kingdom, where ample facilities will be given for the special scientific study of the subject.

The managers of the Liverpool school urge that their work is not a local one, nor even limited to the British Empire in its beneficent scope. They plead that all countries having commerce in tropical regions should interest themselves in the work, as, quite apart from humanitarian considerations, tropical diseases are one of the greatest barriers at present to the extension of commerce in the countries where they prevail. A short time ago, letters were received from Professor Koch, of Berlin, heartily indorsing the undertaking, and stating that Germany was about to found a similar institution. The matter has been officially brought before the foreign consuls in Liverpool, and they, after several conferences, expressed their appreciation of the great value of the movement, and the suggestion was made that each consul should, in such manner as might be deemed best, bring it to the attention of his government and of the medical profession and others in his own country.

Pecuniary aid from foreign governments will not be solicited, but would be gratefully received. The Liverpool school would be pleased to exchange information and the results of scientific observation upon all phases of the subject with any foreign government, or any foreign medical society or hospital, or with any individual traveler or professional man, and foreign students would be cordially welcomed. Those interested are invited to communicate with Professor Boyce, University College, Liverpool. The international feature of the Liverpool School of Tropical Diseases has already received recognition from America. Several months ago, Bishop Hartzell, of the Methodist Episcopal Church of the United States, passed through Liverpool en route to his field of labor, which embraces the whole of Africa. While here, he became greatly interested in the Liverpool School of Tropical Diseases, and arranged that one of his medical missionaries who was shortly to follow him should study for three months at the school. Several consuls representing maritime nations say that they will advise either direct support to the Liverpool school or cooperative action, for the reason that many victims of tropical diseases that have come under their observation at Liverpool have been sailors of their own nationality.

It is the expectation that the Liverpool institution will become the recognized school for the training of Government medical officers proceeding to the West Coast of Africa. A special sphere of activity will be the organization of expeditions to Africa to study tropical diseases, and I am officially advised that students from American medical colleges are invited to accompany these expeditions. Professor Christophers is now conducting an expedition in Africa with this object. He is working under the auspices of the British Government, and was specially selected for that purpose by the Royal Society on request of Mr. Chamberlain. He is operating in co-operation with both the Liverpool and London schools.

It is suggested here that in view of the new responsibilities and opportunities in the West Indies and the East, this enterprise should meet with sympathetic interest in the United States.

JAMES BOYLE,
Consul.

LIVERPOOL, *April 25, 1899.*

LABOR CONDITIONS IN GREAT BRITAIN.

It might be well to understand that "free-trade" Great Britain, owing to a commendable feeling of loyalty to British interests and the almost universal recognition of an obligation to purchase, whenever possible, articles of British manufacture only, is in a degree a very well protected country. One can pick up almost any publication—a daily, a weekly, or a monthly—and see that the advertising line regarded as most catchy is "Support home industries; give employment to British labor." There is real value in that line, as there is in it the spirit of the people, very few of whom will buy knowingly an article of foreign manufacture if the same article is manufactured in Great Britain, even though this be higher in price; and from the mouths of store or shop keepers the word "imported" has not, to the ears of Britishers, the dulcet sound it has with us. This form of patriotism, it seems to me, is worthy of our partial imitation. The determination to support home industries is the first obstacle the American salesman encounters in this country, and the second is the length of time it takes to introduce a new article. I could give instances without number where manufacturers here have declined advantageous offers of component parts of the articles they make, or have even refused to allow such offers to be made, when they knew that the components were of foreign manufacture. They simply would not permit themselves to be tempted by price or quality. Press and public both feel at liberty to take to task anyone buying manufactured articles abroad, and a good excuse must be given.

The builders of the new electric underground railroad in London were some months ago arraigned in the press for purchasing in America the big elevators which are to be used to lower the passengers to the railroad level; and there were discussions as to whether these elevators could or could not be made here, the railway people claiming, in the defense which was forced from them, that in electrical matters America had had so much more experience, it was perhaps best to have the elevators built there. They added that it was necessary in this case, as British engineering works were so overcrowded with work; and promised, if my recollection is correct, to give some later orders here if possible.

Some months ago, also, it was made known that the Midland Railway Company had ordered twenty locomotives, ten each from two manufacturing firms in the United States, and the newspaper comments were many and reproachful; and at the annual meeting

of the Midland shareholders, the chairman explained that the company's business had increased so greatly that engines for immediate use were absolutely necessary. He said the company had given orders for two hundred locomotives to British manufacturers, and would have been glad to have given the rest of the orders at home, but all the engineering works of Great Britain were so far behind with work, owing to the great engineering strike, that no British firm could be found to accept orders beyond what had been given them; so, as a last resort, the company had to look to America, and they found that not only could they have engines built very cheaply there, but that the American engines would be delivered long before the British engines were ready. Yesterday, the London Daily Mail printed a special cablegram from Philadelphia stating that one of the directors of the Great Northern Railway of England had visited that city within a few days, and the result was an order had been given to the Baldwin Locomotive Works for twenty engines for use on the Great Northern lines. The concluding line read "Baldwin's recently received an order for thirty locomotives for the Midland Railway," and the explanation is, I believe, that the Midland has recently increased its American order, though originally only ten locomotives were ordered from Baldwin and ten from Schenectady. This cablegram naturally stirred things up, and the Daily Mail, energetic as usual, demanded an explanation, and in this morning's issue prints the following:

OUR IMPORTED ENGINES.—WHY THE GREAT NORTHERN SENT TO AMERICA.

[Daily Mail Special.]

The exclusive information cabled by our Philadelphia correspondent that the Great Northern Railway Company has placed an order for a number of engines with the Baldwin Locomotive Works in that city was, on inquiry yesterday at Kings Cross, confirmed by Mr. C. Steel, the general manager.

As that gentleman explained to a Daily Mail representative, it was a matter of great regret to the directors that they had been compelled to take this course; but there was no alternative. It was impossible to obtain the engines in this country by the time required, and therefore it was necessary to go elsewhere for them.

Mr. Steel gave striking proof of the truth of what was stated in our leading article yesterday as to the inability of British engineering firms to promise prompt delivery. Apart from the engines which have been ordered from America, the general manager said the company already had engines on order in this country. For months it had been wanting them, but could not get them.

"We have every wish to be loyal," he said, "and have no desire to send trade out of the country; but all the engineering firms are full, and the orders we have given are months behind time in being fulfilled."

And this is the outcome of the dispute in the engineering trade.

It is stated from New York that the Baldwin Locomotive Works has received orders to construct ten large passenger engines for the French State railways.

The first batch of locomotives for the Sudan Railway, says the press association, will come from America, no English firm having been able to deliver them in the time required by the Egyptian authorities.

In yesterday's issue, the Daily Mail commented editorially on this order of American engines by the Great Northern Railway. The editorial dealt with the conditions which caused this foreign order, and as I think it has a direct relation to labor unions, and that it will serve well to post our labor leaders and warn them against some of the mistakes which British unions have made, I consider it important enough to present in full. Under the caption "The results of a mistake," the Mail said:

The news that the Great Northern Railway Company is following the example of the Midland Company and ordering locomotives in America may well inspire in us some uneasy reflections. The original mischief was caused by the most insane and disastrous labor struggle of recent years—the dispute in the engineering trade. As a consequence, all work in our British establishments was thrown back, and the foreigner was given a great opening, of which he took the fullest advantage. Owing to the arrears of work, our British firms were unable, even at the close of the struggle, to promise prompt delivery. And thus the hold which the foreigner has gained is being strengthened, for those who want their orders quickly completed are going to the United States.

As an example, we may quote from Bradstreet this instance: A Sheffield firm required six planing machines—all to be speedily delivered. Two were ordered in America, two in Glasgow, and two in Leeds. The New York Trade Journal states that the only firm which delivered its goods on time was the American. Its planing machines were shipped and actually erected in part before either of the home firms had done more than cast the bedplates.

No doubt, it was stress of work due to the strike which hampered the two British firms. But let the community consider the net result. The foreigner has scored a success and won an opening where the Britisher formerly had things all to himself. The home engineering firms shrink from laying down fresh plant and adding to their capital to meet a rush which is due, as they consider, to the arrears that have accumulated, and which, when it passes, will leave their extra machinery and capital unemployed.

There is, too, a further moral for the workman. From the Clyde shipbuilding yards the story comes that the men, who are drawing high pay and can earn all that they want by putting in three or four days in the week, can not be persuaded to labor continuously for the six days. It is certain that the Clyde yards are so busy that they are turning orders away, with the result that these go to foreigners. Here, then, the men are shortsightedly acting against their own larger interests, and are giving to the alien half the loaf, when, with energy, they might keep the whole loaf to themselves. At present, this is all very well; but when the slack times come, how will the men like the foreign competition which they have encouraged?

That the great engineering strike was a quarrel disastrous alike to the interests both of British labor and capital is well known, and such facts and comments as these only accentuate how far-reaching its effects were. Some time ago, when reading in American papers the accounts of the annual meeting of one of our national labor organizations, and noticing the friendly way in which visiting British labor leaders were received, I hoped, yet did not at the time feel that I dared to express the hope—it is so easy to be misunderstood—

that all the views of these British labor leaders would not be accepted by American workmen, and that their influence would not have as pernicious an effect upon our industries as my observation here leads me to believe they have had on their own British industries. Now that our export trade has become so important a factor in our prosperity, American labor unions will find it, I believe, to their own advantage to consider very carefully the effect any union act may have on that trade. It is a tribute to the faithfulness and energy of American workmen that American manufacturers can compete in the world's market while paying for the highest priced labor in the world; but this is, at the same time, the cheapest, for American workmen work and give good value for the money they receive, taking few holidays, and do not shirk during hours.

The day after to-morrow will be Good Friday. It will also be bank holiday, which is a legal holiday, and Monday will be another bank holiday. Last year, at a similar period, there were blue skies in manufacturing Birmingham for nearly ten days, and it was eight days before I saw the smoke from the first factory chimney; and the owner of that factory, perhaps overwhelmed with orders, was probably making a vain effort to coax some of his people back to work. A manufacturer will say:

I would be happy if I could even get my men back in a week after a bank holiday; but it is hopeless to try to get fairly started again inside of ten days, and one can not, you know, afford to burn fuel for the half dozen who will go to work. My clerks will take stock, and, as an encouragement and with a hope of improvement in the future, I pay extra wages to any of the factory hands who do turn up; but, as the machinery is not going, they are put at the stock taking.

If the weather is clear, there will be over a week of blue skies again in the Midlands this year. Will the facts that British engineering firms are so busy that orders for locomotives must go abroad, and machinery and many other things must be purchased, whether from home or not, make any difference? Not a bit of it; and there are six holidays during the year. At Easter and at Christmas, they come in pairs; so that there are really four periods during the year with from a week to ten days of national idleness; and during the fifty-two weeks of the year, there is on every Saturday a half holiday, which is so universally observed that even the repair hands in the smallest bicycle shops lay off, and on this great bicycle-riding day it is almost impossible after 1 o'clock to have the slightest repair made to a bicycle, to replace a lost nut, or buy a monkey wrench, a bottle of oil, a pump, or to get a puncture stopped; and with a percentage of workingmen, Monday is another holiday, a sort of Saint Recovery day.

The introduction of American machinery had perhaps something

to do with the engineering strike. It at any rate brought matters to a crisis, for the workmen were opposed to any kind of new machinery, believed in the one-man-to-one-machine practice, made it difficult for a willing workingman to do more than a minimum of labor, and wasted from ten to twenty minutes after the bell rang at the end of the breakfast, the noon time, and the tea recesses. Now, there are hundreds of American time clocks in British factories; but a good salesman of American machinery is still very careful about guaranteeing an output of over two-thirds of what his figures might be at home.

The Daily Mail editorial and special cablegram give a good idea of what advantage the engineering strike has proved to be to "foreign" competitors. The slate strike introduced well-machined, well-colored American slate; and I believe some of it is sold here now. The Welsh coal strike of last summer made American coal a competitor of British in Mediterranean and South American ports. Strikes here are not based so much on wages as on factory friction. I know of a factory with eight hundred hands, a large proportion of them highly skilled, and their average wages hardly equal 70 cents a day; the foreman's 2 guineas (\$10.20) a week is considered ample compensation and he has worked faithfully for the same employer for a quarter of a century. This concern, by the way, ships its product to the United States, there being no duty of importance in the way.

In closing, I attach the following condensations of some clippings, most of them from the Daily Mail. I have saved them from time to time, to show how important a bearing labor willingness or unwillingness has upon a country's foreign trade:

RESPONSIBILITY OF TRADE UNIONISM.

The dispute between the master builders and the plasterers' union suggests some serious reflections on the uses and abuses of trade unionism. The present case is so obviously an instance of its abuse that even so ardent an advocate of the claims of labor as Mr. John Burns finds it needful to offer a strenuous word of advice. There is, unfortunately, reason to apprehend that the spirit which dictated the tyrannous conduct of the plasterers' union exists—though not always in so exaggerated a degree—in many another organization. It is noteworthy, too, that recent movements for the better organization and federation of capitalists were provoked more by the growing tendency of trades unions to infringe upon the management of industry than by any desire to resist legitimate combination for the improvement of wages and conditions of employment.

The plasterers' union are face to face with an ultimatum from the employers, and, in view of the advice of their organizing secretary and Mr. Burns, they may be expected to recede from the indefensible position they have taken up. But the moment is opportune for all trade unionists carefully to consider the position into which certain of their leaders are forcing the unions. The fact which needs to be brought home to the organized worker of to-day is this, that labor has responsibilities

as well as rights; that it can not play havoc with industry without doing permanent damage to the national interests and eventual hurt to their own.

A remarkable instance of the free-and-easy way of the workers comes from Glasgow.

Trade is particularly brisk on the Clyde, and it is a common thing for riveters and platers to earn a pound a day. Instead, however, of making the most for himself and, for his industry, the worker prefers to go on holiday while his resources last. Thus it comes about that half the time the shipyards are short handed, while orders have to be refused and are sent abroad for execution. This undisciplined tendency of the British workman seriously threatens the dominance of our great industries. In this connection, it is interesting to note the remarks of Dr. Inglis to the Institute of Marine Engineers, who suggests that the discipline of the German army produces in its industrial army habits of order and respect which stand the worker in good stead in industrial life. Equally significant is the report of the iron and steel trades' delegates a few years ago, who refer to the "superior discipline" of German workmen as making for efficiency. It is obvious that no such method of producing discipline is possible, even if it were desirable, in this country. But the trade union might be more of a disciplinary organization than it is. It ought to insist upon a fair day's work for a fair day's pay, and if it pretends to a share in the control of industry, it should be prepared to weigh the effects of its own policy on the development of national resources.

BRITISH TRADE GOING.—MR. RITCHIE EXPLAINS WHY WE ARE LOSING IT.

Mr. C. T. Ritchie, president of the Board of Trade, in the course of a reply yesterday to a trades union congress deputation, who waited upon him with respect to certain grievances of railway servants, and to the subject of workmen's trains, took occasion to make some statements of very grave importance as affecting the commercial position of the country.

In short, on the authority of the one man in the country who ought to know best, America and all the European countries of importance have for some time been increasing their export trade. Our export trade has, during the same period, been going back. The question of our commerce, said Mr. Ritchie, was one of supreme importance to all interested in our prosperity. Workmen were as much interested as any capitalist could be. He had great faith in the capabilities of his country and his countrymen, and he was not going to speak in accents of despair as to the future. He believed that, with the knowledge, determination, and good will of Englishmen, we should be able to meet the competition of our rivals in the future as successfully as we had in the past. But it could not but be a source of anxiety to him to know that every European country of any importance, and also America for the past few years, had been increasing its export trade, some to a very large extent, while we had been going back.

Our foreign rivals were successful (1) owing to the very great adaptability shown by the foreign manufacturers, and (2) by reason of their great commercial, technical, and general education.

The advantages enjoyed by our competitors would, he hoped, be speedily diminished by the action which might be taken in this country. They, however, must not disguise from themselves that there was another reason. He referred to the unhappy disputes between capital and labor. In connection with the coal and engineering disputes, large sums of money had been lost and accumulations expended. There had been suffering endured with unexampled patience, and, he asked, who had been the gainers? Not the workmen. Neither had the masters. Their losses, like the men's, had been extremely heavy. The people who had

gained were our foreign rivals, to whom orders had gone in large quantities. And orders once having gone, did not quickly return.

The population of the country was increasing, and employment must be found for it. It was to be found by the embarkation of capital in industrial enterprise. One of the great evils of these unhappy strifes was that they frightened capital away, and large sums of money had been embarked in industrial enterprise abroad which we should have liked to have seen spent in a similar way here.

He did not wish to apportion blame for those wars; he wished to impress upon all the imperative duty which rested with those who wished to put an end to strikes.

The Czar was making a supreme effort to bring about international peace, and everybody must admire the motives which prompted him to summon the conference. The present was a time of peace and good will. Could they, then, not follow in their way the example of the Czar and endeavor to bring about, if possible, a conference, in order to achieve industrial peace?

He did not think the difficulties insurmountable, and, at any rate, they could be considered.

THE RESULT OF WORKMEN'S EXACTIONS.

Only recently, a huge order for steel rails has gone to America which should have been placed here. The London agents of the American firms were on the alert, with the result that this fat little order—paid for with the money of British capitalists for a railway in a British colony—has gone to the famous firm of Carnegie, of Pittsburgh, United States of America.

The lowest irreducible quotation of the Middlesbrough firms was 15s. (\$3.64) a ton higher than Carnegie's. The buyers thus save some 20 per cent—and who can blame them?—and the American people receive an addition to their spending power of some £200,000, showing their wisdom.

In addition to the order for rails, the same firm is supplying all the accessories required, such as fish plates, spikes, nuts, and bolts, their prices for these being actually about one-half of the lowest British makers.

The two orders combined mean the transfer to America of about a quarter of a million of British capital; and are they not wise in getting it into the country, even if at little profit?

Like our German rivals, the Americans readily adapt themselves to the requirements and circumstances of the people for whom they cater, and willingly depart from the beaten track to meet the requirements of their customers; but their principal advantages undoubtedly lie in better machinery and better labor; and, to be quite fair, Brother Jonathan is not hampered by the exactions of his workmen to the same extent as his British confrère. The American workman works harder during the hours of work, and piecework governs him more than his fellow-workman in this country.

Recently, an English maker of plows and implements found his business drifting steadily to America. He opened his morning mail bag only to find an increasing number of bills and fewer orders. Ruin seemed so imminent that he determined to sail across and find out on the spot how it was the Americans undersold him. He called upon one of his rivals on landing and told him frankly the object of his visit.

The American expressed every willingness to show the Englishman over his works, and guessed they had better begin at the beginning and "go right through." In the first shop they entered, six machines were humming merrily at their work, all of them being operated by one workman. "That is enough for me," said the English maker; "I don't want to see any farther. In our country, I should be compelled by the trade union to put a man at each of those machines, and perhaps a boy to help him, or shut up shop."

The subject presents serious questions for the British workman and the British manufacturer, and conditions which will not be solved by strikes or trade unionism—or even boards of conciliation.

The present plasterers' strike would offer a good opportunity to introduce stamped-steel ceilings and walls, if any of our concerns had a really good selling agency in London. No set of workmen, in the opinion of builders and architects, have been so unreasonable as the plasterers, and if the matter were properly presented, there might be found a readiness to do away with the surface or finish plasterings, and substitute the easily attached steel finish.

In one clipping above, the story is told of the British manufacturer who had gone over to the United States to see for himself what was going on there. There is a good deal of that thing done now, both by Germans and Britishers. The returning investigators report how open the doors of American factories are, and laugh sometimes at the foolish pride shown in giving mechanical points away. It is quite the thing for the younger sons of great German manufacturers to go over and work several years in American factories, and, generally, they do not reveal their identity or tell the purpose of their American apprenticeship. I know of one well-to-do Englishman who did this, and he has now a successful wood-working machine factory. The head of perhaps the largest nut and bolt manufactory in Great Britain has been to the United States twice within eight months, has American machines, an American foreman, and so forth. The British agent here of one of our big nut and bolt manufacturers wrote and protested against this factory being shown, but in vain.

MARSHAL HALSTEAD,

BIRMINGHAM, *March 28, 1899.*

Consul.

LABOR IN WEST GERMANY.

In consequence of the great number of schools in Germany, a large proportion of the people work with the pen, and those who perform manual labor are not numerous enough, in some places, to supply the demand. In the field of ordinary labor, especially in earthworks (draining, etc.), many Italians are employed, especially in the Rhine provinces. Having few wants, they work for low wages, and yet take away with them considerable savings. Of all foreigners located in the German Empire, the Italians have of late years shown the greatest increase.

The following table will give information as to the extent of wages paid, although the figures are to an extent approximate. The day usually consists of ten hours' labor.

Wages per day.

Class of laborer.	In Cologne.	Near Cologne.	Country.
Laborers under 16 years:			
Male	\$0.357 to \$0.476	\$0.285	\$0.238 to \$0.428
Female.....	.238 to .357	.238	.19 to .38
Grown laborers:			
Male	.714 to .833	.428	.428 to .476
Female.....	.357 to .476	.357	
Day laborers:			
Male	.952	.576	.476 to .595
Female.....	.476 to .595		
Skilled laborers:			
Male	.476 to .714	.595	.534 to .833
Female.....	.262 to .655		
Bricklayers' assistants.....	.858 to .952	.685	.476 to .595
Bricklayers.....	1.071 to 1.19	.774	.595 to .714
Stone masons.....	1.428		.838 to .952
Smiths.....	.714 to .833	.774	
Carpenters	.714 to 1.071		

Bakers get \$2.38 per month with board and lodging; butchers, \$3.57 to \$10.71 per month with board and lodging; female servants, \$3.80 to \$5.95 per month with board and lodging.

The dwelling arrangements for married workmen are very poor. An apartment of two small rooms costs, in Cologne, \$3.57 per month, and workmen with families must spend from \$4.76 to \$5.95 monthly.

The prices paid by workmen for food per kilogram (2.2046 pounds) are as follows:

	Cents.
Wheaten and mixed bread.....	11.9
Rye bread.....	4.76
Beef	28.56 to 30.94
Mutton	28.56 to 33.32
Bacon.....	33.32 to 35.70
Fat	19 to 21

For pork, which forms an important part of the food of the workmen, more is actually paid, from the fact that they often buy in small quantities—2, 4, or 5 cents' worth. The prices of meat vary considerably in different localities.

In December, 1897, the wholesale prices for 220 pounds of best pork (the inferior kinds, owing to their differences of quality, can not be used for comparison) were: In Breslau, \$27.89; in Cologne, \$29.70; in Hanover, \$29.75; in Frankfort, \$31.06. A proportionately large amount of the laborer's earnings is spent for beer, which costs from 4.76 to 7.14 cents per liter (1.05 quarts). Brandy is used considerably, but mostly by earth laborers and those who are subjected to dampness. Coal costs 22.61 cents per 100 pounds; briquettes, which are much used by workmen, cost 9.52 cents per 100 pounds.

Petroleum costs 4.05 cents per liter. This year, prices have had a tendency to rise, there being a like movement in the scale of wages, especially in this vicinity. In some factories, the wages of the youthful workers advanced 20 per cent during 1897.

In Cologne, buildings finished in the middle of 1898 cost 20 per cent more than those finished at the beginning of the same year. The builders compensate themselves for this additional outlay by an advance in rents. The manufacturers, however, owing to strong competition, can not advance their prices on goods, and must content themselves with less profit.

The gradual increase of wages has, on the whole, been accomplished without any great struggle. In this district, strikes are rare. There is a great demand for labor during the summer; in winter the demand is small. In order to meet the contingency of a dearth of work in the winter, an office has been opened in Cologne where, on payment of small assessments each week, a workman receives for unemployed time a minimum day's wages. With this office there is connected a labor registry, and, before a laborer receives his daily allowance, the registry is searched to learn whether there is any work available which the man may be able to perform. If such is the case, he must accept the work. At the same time, an effort is made to improve the moral and intellectual condition of the workmen.

In disputes relating to the adjustment of satisfactory wages, the leaders of the unions often assume the rôle of mediators, and strikes are either avoided or shortened. In the country, conditions are different. In the Moselle district, a dwelling of two rooms with a stable costs \$14.28 per year; of two to four rooms, \$17.14 to \$25.07 per year. Coal costs from 23.8 cents to 30.9 cents per 110 pounds, according to locality. Meat, regardless of kind, costs 27 4 cents per kilogram; rye bread, 5.47 cents per kilogram. It is proper to state that the people in these parts use hardly any coal, as they have considerable quantities of refuse wood. Most of the workmen carry on farming, and, as a consequence, keep cattle or hogs, and thus often produce their annual supply of food. Many also own their own dwellings, and as soon as possible seek to become free from the necessity of working for wages. As a consequence, manufacturing districts secure but few hands from these parts, which does not conduce to the establishment of manufacturing industries.

At present, all branches of industry seem to be prosperous, and the people, in general, are busy and contented.

JOHN A. BARNES,
Consul.

COLOGNE, *April 21, 1899.*

GERMANY'S TRADE WITH SWITZERLAND.

This Empire's exports to Switzerland present some interesting facts and figures. They nearly equal the combined exports thither of France and Italy. German exports to Switzerland in 1897, the last year for which details are given, amounted to 306,400,000 francs (\$61,280,000); France's, to 192,400,000 francs (\$37,056,000); Italy's, to 149,800,000 francs (\$28,757,000); Austria's and Russia's, each, to 67,000,000 francs (\$12,931,000); England's, to 54,000,000 francs (\$10,422,000); the United States, to 52,000,000 francs (\$10,036,000). Swiss exports to Germany amounted to 75,600,000 francs (\$14,590,800); to England, 146,100,000 francs (\$28,197,300); to France, 83,600,000 francs (\$16,134,800); to the United States, 71,000,000 francs (\$13,703,000); to Austria-Hungary, 41,300,000 francs (\$7,970,900); to Italy, 39,000,000 francs (\$7,527,000); and to Russia, 24,400,000 francs (\$4,709,200). Thus, Germany supplied a good third of Switzerland's imports. Details in regard to textiles, a branch in which the United States is rapidly increasing its power to export, will prove interesting. Of these, Germany sent:

Articles.	Value.	Articles.	Value.
Woolen yarns.....	\$476,000	Cloths and underclothes:	
Woolen passementeries.....	23,800	Cotton	\$2,165,800
Unprinted woolen hose.....	261,000	Silk and half silks.....	333,200
Woolen cloths and clothing, prints..	119,000	Undyed flocet silk.....	190,400
Woolen cloths, unprinted.....	3,189,200	Raw silk:	
Heavy coarse cottons, bleached.....	190,400	Dyed.....	809,200
Passementerie and button makers' wares	166,600	Undyed.....	190,400
Hosiery	190,400	Half silk:	
Flowers from woven or knit goods....	47,600	Ribbons.....	95,000
Linen and cotton clothing.....	333,200	Cloths, etc.....	404,600
Linen, etc.....	190,400	Silk cloths, etc.....	214,200

The exports from Switzerland to Germany in the same line were:

Articles.	Value.	Articles.	Value.
Woolen goods.....	\$214,000	Flocet silk, undyed.....	\$3,498,600
Woolen yarns.....	523,600	Raw silk, undyed.....	5,831,400
Cotton goods.....	3,213,000	Silk waste.....	476,119
Cotton yarns.....	1,475,600	Silk cloths, etc.....	1,166,200
Rags.....	166,600		

Although the present trade treaty does not expire till 1903, there is a likelihood of Switzerland buying less German goods, because of a disposition in this Empire to boycott Swiss Government bonds.

Large quantities of Swiss railroad bonds are in the hands of German speculators, and feeling has grown out of the action of these speculators that can not fail to have its effect on future business between the two countries. Every effort will be made by the Empire to evade responsibilities attaching to private individuals. Still, trade is carried on between individuals, as such, rather than between states. Under these circumstances, there is a possibility of extending our trade with the Swiss Republic. Hundreds of tons of the goods taken by Switzerland from this Empire could come from the United States. We might easily make a better showing in cheap woollens and cottons. Germany's lead is due not to any superiority or cheapness of goods, but to a most excellent system of canvassing Swiss territory.

J. C. MONAGHAN,

CHEMNITZ, *April 8, 1899.*

Consul.

GERMANY'S MERCHANT MARINE.

It is interesting to note this Empire's eagerness to equal England as a mercantile and manufacturing state. This city, hundreds of miles inland, organized last week a branch of what is known as the national union for increasing the fleet. In the industrial development that has assumed gigantic proportions in the last forty years, the mercantile marine has not only kept pace with internal progress, but has done much to increase its fields of operation. Germany's fleet is second only to that of England. In 1875, Germany's merchant marine numbered 4,062 ships with 1,068,000 registered tons net; in 1895, she had 3,665 ships with 1,554,000 tons; in 1898, 3,693 ships and 1,555,000 tons. While the number of ships is smaller, the number of tons, compared with 1875, has increased 50 per cent. The falling off is in sailing ships. In 1875, there were 4,303 with a capacity of 878,385 tons and 299 steamers with 189,998 tons; in 1885, there were 3,607 sailing ships with 880,345 tons and 650 steamers with 413,943 tons; in 1895, 2,622 sailing vessels with 660,856 tons and 1,043 steamers with 893,046 tons; in 1898, 2,522 sailing vessels with 585,571 tons and 1,171 steamships of 969,800 tons. In general, a steamer is thought to be able to carry three times as much as a sailing vessel of the same size. The falling off in sailing ships from 4,303 in 1875 to 2,522 in 1898 was more than made up for in the increase of steamers from 299 in 1875 to 1,171 in 1898. The regular crews numbered, in 1898, 42,428 men. The average was 5.7 men to a sailing ship and 24.3 to a steamer. German writers point with pride to the fact that whereas formerly a good many, if not quite all,

of the big ships were built abroad, they are now built in German ship-yards, by German mechanics, with German materials, etc. All that is now needed, they say, is a powerful fighting marine. The Empire's interests are in every part of the world. These must be protected. Germany will probably give attention next to building a large and powerful fleet.

J. C. MONAGHAN,
CHEMNITZ, *April 16, 1899.* *Consul.*

SHIPBUILDING IN GERMANY.

The German shipbuilding industry, owing to the numerous new steamers ordered, has been profitably employed during the past year, and the statements of the principal companies recently published, with one exception, show favorable results.

The Vulcan Works at Bremen, which for a long term of years has made a uniformly good showing, was able to pay its stockholders a 12 per cent dividend, instead of 10 per cent as in 1897.

The Howaldts Shipbuilding Company, at Kiel, paid 7 per cent dividend, the same as in the previous year, carrying besides a very considerable sum to its reserve fund.

The great Neptune Shipbuilding and Machine Manufacturing Company, at Rostock, which has never heretofore been able to pay a dividend, now announces that it will pay its shareholders 4 per cent.

On the other hand, the Seebeck Shipbuilding and Dry Dock Company, at Geestemünde-Bremerhaven, after years of prosperity, makes quite an unfavorable showing, its balance on the loss side being the considerable sum of 322,224 marks (\$76,689). The special reasons for the loss are not published. In 1897, as well as in 1896, it paid dividends of 7½ per cent to its stockholders.

W. K. ANDERSON,
HANOVER, *April 7, 1899.* *Consul.*

ELECTRIC-RAILWAY CONSTRUCTION IN GERMANY.

Of the more important German cities, Aix la Chapelle, Brunswick, Chemnitz, Dresden, Hamburg, Hanover, Leipzig, Munich, and Stettin have almost completely abandoned horse cars and are supplied with electric roads. In the cities of Berlin, Breslau, Cassel, Cologne, Frankfort-on-the-Main, Düsseldorf, Barmen, Elberfeld, Königsberg (East Prussia), and other places horse lines are being converted into electric roads, and most of these have suburban electric

roads completed. A large number of electric lines are being constructed in the country districts about Aix la Chapelle, Bochum, Gelsenkirchen, Düsseldorf, Vohwinkel, Elberfeld, Barmen, Elbthal, Essen, Kraiss Hoerde, Reisengebirge, Waldenburg (Silesia), Witten-Ruhr, and in the mining districts of the Saar (southern Rheinland) and in Upper Silesia. In thirty-five cities and districts, not mentioned in the above lists, electric roads were in the course of construction on September 1 last, in nine of which the roads were completed and put into operation before the close of the year; so that at the beginning of the year 1899, there were seventy-seven cities and districts in the Empire supplied with electric roads. In thirty-five of these places, extensions were being made to the lines in operation September 1, 1898, some of which were completed before January 1.

The following is a comparative statement of electric-railway construction in Germany for the past three years:

Description.	August, 1896.	September 1, 1897.	September 1, 1898.	Per cent of increase in 1898 over 1897.
Power houses.....	42	56	68	21.4
Miles of roads.....	362.2	594.7	888.1	21.4
Miles of tracks.....	530.7	842.1	1,204.9	43
Motor cars.....	1,571	2,255	3,190	41.5
Trailers.....	589	1,601	2,128	32.9
Electric power, "K. W.".....	18,560	24,920	33,333	33.8

Adding the roads put in operation since January 1, 1899, it is estimated that there are now 930 miles of electric roads, with a total of 1,300 miles of tracks, in Germany. Many American cars are used.

From the city of Düsseldorf there are now four suburban electric lines completed: From Düsseldorf to Crefeld, about 12 miles; from Düsseldorf to Rattigen, about 8 miles; from Düsseldorf to Benrath, about 6 miles; and from Düsseldorf to Kaiserswerth, about 5 miles.

GEO. P. PETTIT,

DÜSSELDORF, *April 6, 1899.*

Consul.

AUTOMATIC CAR COUPLERS IN EUROPE.

A recent discussion in the British House of Commons regarding the enactment of a law compelling all railways in the United Kingdom to equip their rolling stock with automatic couplers has started agitation along the same lines in Germany. As in all matters pertaining to the safety and comfort of employees and of the traveling public, our railways are in this respect far in advance of those of other countries. Years ago, the railway companies in the United

States were ordered to adopt automatic couplers and were given a term of six years within which to complete the alteration of all of their cars. This term was afterwards extended for a shorter period, in order to give certain roads which had not been able to fully comply with the law a further opportunity to do so. In the meantime, all new cars have been equipped with improved couplers, and the law may now be said to be in full operation. It is claimed that the dangers incident to the occupation of a brakeman have been reduced to a minimum by this means.

The need of adopting similar measures was urged long ago in Prussia, before the era of State railways. At that time, the German Railway Union offered a large reward for the best safety coupler. The Prussian State railways, however, although much more progressive than other continental roads, have for some unexplained reason relegated the matter to the rear, and apparently postponed its consideration. The surplus earnings of the Prussian railways for the past fiscal year were the enormous sum of 528,000,000 marks (equal to about \$125,000,000), and advocates of the safety couplers hold that some of the said earnings might well be appropriated for this purpose. In the fiscal year 1895-96, 250 railway employees in Prussia lost their lives by accident, and 550 were injured. In 1896-97, the figures were 264 killed and 667 injured.

In the British House of Commons, Mr. Maddison stated that from 1888 to 1897, a period of ten years, 4,757 railway employees in the United Kingdom lost their lives in coupling cars, while 30,271 were severely injured. In 1897, an average of 1 brakeman in every 274 was killed and 1 in every 15 injured; and, among the shovers and pushers, 1 in every 203 was killed and 1 in every 12 injured. Mr. Burns supplemented these figures with the astonishing statement that in twenty-five years—viz, from 1872 to 1897—among 1,500,000 English soldiers, 1,396 were killed in battle, while for the same period 9,000 railway employees were killed, proving that railway employment is much more dangerous than war. The correctness of these statistics was acknowledged.

Some time ago, the British Government sent the expert Hopwood to the United States to examine on the spot the workings of the prescribed automatic couplers, and he reported very favorably, stating that, although they were not at that time in general use, the number of casualties among brakemen had already been reduced 50 per cent. The railway managers in England have been conferred with, and a draft of a bill has been worked out to bring about the introduction of safety couplers. The House of Commons has approved it, and it will soon come up for final passage in Parliament.

W. K. ANDERSON,

HANOVER, *April 6, 1899.*

Consul.

TRADE SUGGESTIONS FOR SCOTLAND.

Some months ago, in a brief report on suiting methods to markets,* I expressed the opinion that the great majority of Scottish business men handling American manufactures, or willing to handle our goods, preferred to deal directly with the manufacturers rather than with middlemen, either on this side or on the other side. Certain exceptions to this rule were noted, such as the bicycle and typewriter trade, which are specialties and have been managed in an exceptional way from the start. Further observation in and intercourse with the business community have confirmed this opinion. The Scottish wholesale dealer, who is in the habit of getting 5 per cent discount on the invoiced price for cash or $2\frac{1}{2}$ per cent at one month in general lines of merchandise, does not like to look upon an invoice that he thinks may contain a middleman's commission. He does not object to paying a price which may include an agent's commission, but he draws a broad line at that. I have talked with agents on this subject. They quite agree on the proposition that an American manufacturing company or firm seeking to extend its trade in this country should offer to deal directly with buyers, and take all orders directly, not to be duplicated to a representative company or bureau. In undertaking to secure an agent in Edinburgh for an association in one of the Middle States, representing manufacturers in various lines and requiring a duplication of orders, I have met with a very emphatic objection:

This will not do. The goods are expected to yield a profit to the manufacturer, a commission to the middleman, a commission to the agent, and a profit to the dealer on this side. That's too many slices of pie, and all must be thin.

In the keen competition for trade the commission agents or merchants—who are the essential men—offering American goods find themselves at a disadvantage, as a rule, if the goods are not shipped from America to Glasgow, Edinburgh, or Dundee, or the nearest port to the customer. For instance, an Edinburgh man who represented an American manufacturing company having a general agent and warehouse in London severed his connection with the business recently, because he could not meet the prices of another American company in the same line shipping direct to a Scottish port. The freight rate on the wares from New York to Edinburgh is but slightly, if any, higher than the rate from New York to London. The rate from London to Edinburgh by water is as high as from New York to

* See CONSULAR REPORTS No. 221 (February, 1899), p. 327.

Edinburgh or Glasgow. By rail, the rate on goods from London to this city is considerably more than the steamship rate charged from New York to Edinburgh. On goods of the kind handled by this agent, the freight from London for a quantity worth about \$50 is \$7.20. This made it impossible for him to compete with the company shipping from New York to Glasgow, and, as I have said, he resigned the agency.

The American manufacturer who gets closest to the market—to the local dealers—will get the trade. Take the case of a large American furniture-manufacturing company, as an illustration of one way to make business in a foreign country. This company sent its own men over to “set up shop” in London and Glasgow. The furniture—household and office—is shipped from their factories to this side in the rough. Being in parts and tightly packed, it occupies little space and pays the minimum rate. It is put together and finished in the London and Glasgow workshops of the company, and salesmen place the furniture before dealers in England and Scotland. This enterprising company has, I am told, a profitable and growing trade.

With reference to business methods, it may be worth noting that the commercial traveler as a factor in trade getting in the United Kingdom was never so prominent as he is now. Some of these traveling salesmen are paid salaries without commission, and others have salaries with commission. Of those resident in Scotland with headquarters in Glasgow, Edinburgh, or Dundee, I have met several, each of whom represents a London house in one line of goods, and under his contract can handle at the same time different lines of goods for foreign houses if he chooses to do so. To introduce their goods, American manufacturers or exporters who would not feel justified in going to the expense of maintaining traveling agents of their own could hardly do better than to secure the services of such men to sell on commission. Some American manufacturers have made good connections of this kind. This has been the practice of German houses in beginning business in the United Kingdom. In a recent conversation, an Edinburgh commercial traveler told me that he built up an excellent trade for a German manufacturing company in the chemical line a year or two ago, which was so highly appreciated that the company sent over a man of their own “just to meet a few of our customers,” and he has not returned to Germany, but has taken charge of the flourishing business in this country, dispensing with the agent who had created the business or at least promoted it.

It is almost needless to say that, next to an active and reliable agent with a thorough knowledge of the wholesale and retail trade, the best connection an American manufacturer can make is with a

wholesale house buying direct. A useful article will win its way if put on the market at a moderate price, even if it be not advertised or otherwise pushed to the front. As a notable instance, a little device, of American invention and manufacture, for perforating checks and drafts with the figures of the amounts for which they are drawn has had a wide sale in Scotland during the past two years, although no special effort has been made to bring it before the public. Much the same thing is true of several other American specialties and of a few lines of staple goods and various kinds of machinery. They gain a market—slowly, perhaps, but surely—by commending themselves.

EDINBURGH, *April 12, 1899.*

RUFUS FLEMING,
Consul.

EXPORTS OF CHEESE AND CANDLES TO THE PHILIPPINES AND WEST INDIES.

Since Cuba, Puerto Rico, and the Philippines have come under the régime of the United States, there have been exported from this consular district to these new possessions large quantities of cheese and candles. During the past six months (October 1 to March 31), there have been issued at this consulate and the agency at Schiedam two hundred and thirty-eight invoices for the islands named, and, with the exception of a few shipments of gin, these invoices have mostly covered shipments of cheese and candles. To Cuba, there have been shipped 514,974 pounds of cheese and 44,000 pounds of candles; and to Puerto Rico, 121,682 pounds of cheese and 435,188 pounds of candles. To Manila a considerable quantity of these two articles has also been shipped, but the exact amount can not be ascertained, as invoices for the Philippines are not always taken out, merchants here claiming it is unnecessary.

The cheese has principally been of the "Edam" and "Gouda" varieties, and the candles mostly the ordinary stearin articles for domestic use.

I report these facts for the reason that I know that cheese very much resembling the varieties named is made in the United States, and it appears to me there might be a chance for American cheese and candle manufacturers to find a market for their products in the islands. There might perhaps also be a chance for enterprising Americans to establish dairies and cheese factories there. In Puerto Rico and some parts of Cuba, there is reported to be plenty of fine and nourishing grass and other food for cattle; and even if there

should be certain obstacles for the dairyman to overcome on account of the climate, I have no doubt that American enterprise will be equal to the task. There is no reason why Americans should not supply the West Indian Islands and the Philippines with cheese and various articles which are now imported from the Netherlands and other European countries.

ROTTERDAM, April 24, 1899.

S. LISTOE,
Consul.

MANCHESTER EXPORTS TO CUBA, PUERTO RICO, AND THE PHILIPPINES.

Consul Grinnell, of Manchester, under date of April 8, 1899, sends tables showing the exports from Manchester to Cuba, Puerto Rico, and the Philippine Islands during the first quarter of 1899, as follows:

Exports from Manchester to Cuba, Puerto Rico, and the Philippine Islands for the first three months of 1899.

Articles.	Value.		
<i>To Cuba.</i>	<i>£</i>	<i>s. d.</i>	
Carpets and rugs.....	110	2 5	\$535.90
Colors, dyestuffs, and chemicals.....	204	16 11	1,434.87
Cotton and worsted and worsted stuffs.....	8,594	14 0	41,826.11
Cotton piece goods.....	23,998	13 2	116,789.47
Cotton velvet, fustians, etc.....	262	9 0	1,277.21
Cotton yarn and thread.....	105	6 2	512.48
Curtains, laces, etc.....	77	6 5	376.28
Damasks, etc.....	3	11 0	17.28
Elastic web, cord, india rubber, etc.....	115	2 10	560.34
Felt hats, straw hats, etc.....	1,922	1 11	9,353.88
Handkerchiefs.....	2,138	7 7	10,406.42
Hosiery.....	18	1 9	88.12
Iron, steel, etc.....	353	6 7	1,769.47
Leather.....	45	19 3	223.68
Linens.....	22,296	4 2	108,504.50
Miscellaneous.....	39	10 11	192.45
Paper.....	15	0 1	73.02
Quilts.....	23	9 0	114.12
Shawls.....	17	17 0	85.87
Silks and silk-and-cotton piece goods.....	185	13 9	903.65
Tape, braid, etc.....	78	3 9	380.50
Towels.....	309	15 2	1,507.44
Waterproof garments and cloth.....	190	5 0	925.85
Wool felt.....	76	13 9	373.20
Yarn.....	71	10 3	348.02
Total	61,391	3 10	298,760.23
Divided as follows:			
January.....	11,830	10 6	57,573.25
February.....	19,039	6 7	92,654.89
March.....	30,520	17 9	148,529.89

Exports from Manchester to Cuba, Puerto Rico, and the Philippine Islands, etc.—Cont'd.

Articles.	Value.		
<i>To Puerto Rico.</i>	<i>£</i>	<i>s. d.</i>	
Carpets and rugs.....	117	16 10	\$573.48
Colors, dyestuffs, and chemicals.....	70	11 5	343.42
Cotton and worsted and worsted stuffs.....	4,346	4 3	6,551.34
Cotton piece goods.....	16,270	17 0	79,182.09
Cotton velvet, fustians, etc.....	179	15 7	874.83
Cotton yarn and thread.....	17	18 6	87.23
Curtains and laces.....	360	4 1	1,759.93
Felt hats, straw hats, etc.....	21	4 0	103.17
Handkerchiefs.....	524	13 3	2,553.27
Hosiery.....	92	0 10	447.92
Iron, steel, etc.....	355	11 0	1,730.28
Leather and hides.....	30	8 5	148.04
Linens.....	3,028	0 8	14,735.92
Miscellaneous.....	7	10 5	36.30
Paper.....	42	16 0	208.29
Quilts.....	9	4 0	44.77
Silk and silk-and-cotton piece goods.....	18	15 0	91.25
Silk yarn.....	10	19 7	53.43
Tape, braid, etc.....	12	4 8	59.53
Towels.....	68	0 3	320.98
Waterproof garments.....	5	8 0	26.28
Yarn, linen.....	4	1 0	19.71
Total.....	22,594	4 9	109,954.86
Divided as follows:			
January.....	6,972	15 0	33,932.89
February.....	3,294	5 5	16,031.57
March.....	12,327	4 4	59,990.40
<i>To the Philippine Islands.</i>			
Colors, dyestuffs, and chemicals.....	173	4 1	842.90
Cotton and worsted and worsted stuffs.....	194	6 5	945.66
Cotton piece goods.....	6,982	17 6	33,982.16
Cotton yarn and thread.....	13	14 0	66.67
Curtains, laces, etc.....	44	11 0	216.80
Damasks.....	36	14 3	178.66
Elastic web.....	6	19 3	33.82
Felt hats.....	281	13 9	1,370.83
Handkerchiefs.....	68	3 4	331.73
Iron, steel, etc.....	2,660	7 11	12,946.82
Leather.....	80	7 0	391.02
Linens.....	234	0 10	1,138.96
Machinery.....	336	10 0	1,637.78
Miscellaneous.....	306	8 8	1,491.26
Paper.....	52	6 0	254.52
Provisions.....	425	16 5	2,072.26
Silk and silk-and-cotton piece goods.....	45	5 0	220.21
Silk yarn.....	8	2 0	39.42
Towels.....	24	1 0	117.04
Waterproofs.....	41	9 4	201.80
Yarn, other.....	9	8 8	45.93
Total.....	12,026	11 2	58,525.35
Divided as follows:			
January.....	3,187	16 9	15,513.61
February.....	4,191	6 8	20,397.12
March.....	4,647	7 9	22,614.62

TRADE IN ADEN.

The following extracts are from a letter to the director of the Philadelphia Museums (to whom the original has been sent) by Consul Cunningham, dated Aden, March 21, 1899:

Aden is not a market for a large quantity of imports; while the territory supplied from here is immense, the demands of the inhabitants are not great or diversified. The entire import trade by sea amounted last year to only \$11,722,223. When Abyssinia and Somaliland are opened up, the trade will become much larger. Cotton goods represent by far the most important article of import. Of shirtings, T cloths, and domestics, the United States has almost a monopoly, and a fair share of sheetings and drills. In the lines of white bleached and colored, printed, or dyed cottons, however, we have practically nothing.

Another article which comes chiefly from India, and also from Austria, Belgium, and Italy, is cotton twist and yarn. The demand of Abyssinia and Somaliland for this article is increasing. Those made in Europe are as a rule bound in skins and held together with paper on which is stamped, in colors, an elephant, from which it would appear that they are made especially for this market. Other articles of import are:

Cutlery.—This is of a substantial quality, but not the best, and comprises all kinds. The trade amounts to over \$4,000 a year. Austria supplies about two-thirds of the imports, and the remainder comes from England. Tools for mechanics, carpenters, etc., also, I think, find ready sale.

Sewing machines.—The American machine, known the world over, has never been introduced here. Of the 93 which were brought last year, 54 came from Austria and sold at a very high price.

Carriages and carts.—Two-seated covered buggies and the cheaper class of traps are most used here. Heavy two-wheeled carts are also imported, mostly from Italy. These are meant to be drawn by bullocks, and the wheels are very large, much like those of a logging wagon in the United States, only considerably higher. The trade in these two articles amounted last year to over \$11,000, of which some \$4,700 came from the United States.

Shoes and lasts.—There are some of the American manufacture here, recently imported by a native firm, and they have met with ready sale. Men's coarse shoes and finer qualities for Europeans are introduced. Cheap but showy articles are desired—low shoes in patent leather of inexpensive qualities, for instance.

Lamps.—I have often thought that this was a promising market for these goods, if some energetic firm would manufacture a good lamp of the kind in use. The lamp must be storm and punka proof, and sell for from 50 cents to \$7. All grades, from the ordinary hand lantern to the huge wall lamp, are in demand. The plain ones are used.

Canned fruits, meats, and such vegetables as corn, tomatoes, beans, etc., are imported to some extent from the United States; but I am sure that our trade could be largely increased with proper efforts.

THE SYRIA-OTTOMAN RAILWAY.

It may interest American manufacturers to learn some particulars about this new enterprise. The chief organizers of the Syria-Ottoman Railway Company are Mr. J. R. Pilling, Effingham House, Arundel street, Strand, London, and Mr. H. Hills, of the Thames Iron Works, London. The proposed capital is \$5,000,000, but no shares will be put on the market, so it is said, until the line is completed as far as Nazareth. The road will run from Haifa, a seaport town 75 miles south of Beirut, to Damascus, a distance of some 142 miles, and the project includes an extension from Damascus to Bagdad and the Persian Gulf. While the Jaffa-Jerusalem (54 miles), the Beirut-Damascus-Hauran (153 miles), and the Lebanon Tramway (10 miles) are narrow gauge concerns, the Haifa-Damascus Railway will be of standard width. It is primarily intended to tap the great Hauran wheat regions, which are only partly developed, being still under the sway of Bedouin and Druze tribes, and to afford another outlet for the growing trade of Damascus, the largest city in Asiatic Turkey. Active operations commenced last month on the division between Haifa and the Jordan, and the line is to be completed in less than two years as far as Damascus. Sir Douglas Fox (28 Victoria street, London) is the chief engineer of the Syria-Ottoman Railway, while Dr. G. Schumacher (civil engineer and United States consular agent) is superintendent of works at Haifa, assisted by Mr. H. T. Foord, agent of the company. The Thames Iron Works being crowded with orders, it is likely, so I am informed, that rails, locomotives, and other material will be bought in the United States.

G. BIE RAVNDAL,
Consul.

BEIRUT, *March 20, 1899.*

CONSUMPTION OF GOODS IN THE TRANSVAAL.

Consul Macrum sends from Pretoria, April 1, 1899, the following statement of stores consumed by the seventy-four companies for mining gold in the South African Republic in 1898, showing the large quantity of supplies required during the year:

Articles.	Quantity.	Value.	
Bran, chaff, etc.....		£7,506	\$36,528
Forage.....bundles...	898,029	15,843	77,100
Indian corn.....muids...	71,699	64,680	314,765
Indian-corn meal.....do....	227,556	204,742	996,377
Meats.....pounds...	4,462,095	83,785	407,740
Coal:			
Smithy.....tons...	22,375	29,381	142,983
Steam.....do....	874,382	668,418	3,252,856
Explosives:			
Dynamite.....cases...	15,805	68,954	335,565
Blasting gelatin.....do....	166,194	821,885	3,999,703
Gelignite, roburite, etc.....do....	15,968	65,098	316,799
Fuse, detonators, etc.....		56,085	272,938
Candles.....boxes...	182,716	92,551	450,399
Paraffin oil.....cases...	17,416	11,665	56,768
Electric-light material.....		60,870	296,224
Lubricants.....		80,222	390,400
Lumber:			
Deals.....		143,922	700,397
Mining timber.....		93,210	453,606
Cyanide.....pounds...	3,672,634	198,878	967,840
Other chemicals.....		36,319	177,746
Quicksilver.....bottles...	1,178	9,944	48,392
Galvanized iron.....		28,147	136,977
Tools (picks, shovels, etc.).....		36,635	178,284
Machinery (cost price delivered).....		758,026	3,688,934
Shoes and dies.....		64,908	315,875
Drill steel:			
Steam.....pounds...	2,116,207	44,872	218,370
Hand.....do....	2,413,720	42,714	207,868
Bar and sheet iron.....		41,076	199,896
Bar and sheet iron.....		41,624	202,563
Screening.....		17,957	87,388
Wire ropes.....		27,954	136,038
Rails.....tons...	4,162	53,543	260,568
Piping and fittings.....		169,826	826,458
Trucks.....		44,199	215,094
Sundries (screws, nails, etc., not included elsewhere).....		460,103	2,239,090
Cement.....casks...	22,693	42,965	209,089
Zinc.....pounds...	1,723,673	31,538	153,480
White lime.....		17,463	81,997
Total.....		4,737,508	23,055,083

UNITED STATES TRADE IN WEST AFRICA.

Acting Consul Trice sends from Sierra Leone, under date of January 26, 1899, copies of letters to commercial firms in the United States, from which the following information is taken:

West Africa presents an excellent field for the extension of American trade. Men willing to give personal attention to the diversified requirements of the coast are needed. Trading here is not exactly like trading in America. The British, continental, and native firms here might be induced to deal more in American produce and manufactures, and in this way benefit would accrue to our exporters; but it would be much more profitable to establish American firms on the coast capable of maintaining a supply adequate to the great demand for United States goods. There is one American firm in this city that has done excellent service in the past, and to it (Messrs. Yates & Porterfield, 10 William street, New York) is due the credit of having created the present demand; but the market is so large that there is a good opening for others. American goods are in demand all along the coast. There is a growing realization of the need of a line of steamers direct between the United States and the west coast. The advantages our country would realize through such a medium of communication can be seen at once, when it is noted that scores of prominent native merchants visit Europe annually, making trade alliances. There is a demand for an extension of commerce with the United States, and this would be most effectively promoted, I think, by the establishment of a line of steamers.

TONNAGE DUES AT LOURENÇO MARQUEZ.

The following decree, dated Lisbon, December 7, 1898, and relating to tonnage dues, has just been published in the Boletim Oficial of this province:

All vessels, Portuguese or foreign, steam or sail, entering the ports of the province of Mozambique will be subject to the following tonnage dues, to be paid at the first port in the province at which the vessel shall call. Said vessels, having once paid these tonnage dues, may proceed to other ports in this province without having to pay any further tonnage dues at any such ports.

Schedule of charges.

	Reis.	Cents.
Sailing vessels in foreign trade.....per registered ton...	150	= 10. 5
Steam vessels in foreign trade:		
"Tramps"	50	= 3. 5
Regular liners, and coming from a Portuguese port.....	25	= 1. 8

Vessels engaged in the coastwise-trade shall pay, once each year, a tax of 150 reis (10.5 cents) per registered ton.

The following vessels are exempt from tonnage dues: Men-of-war of any nationality, yachts belonging to a legally organized yacht club, vessels exempt by reason of treaties with foreign powers or of contracts with the Portuguese Government, tugs and fishing vessels of less than 20 tons register, vessels in distress or calling for orders and not receiving or landing cargo, steam vessels calling for coal or provisions, vessels bringing shipwrecked people or prisoners, vessels entering to transship cargo from other vessels that may be in distress or condemned, vessels bringing specie.

The average rate of exchange between Portuguese silver and English gold is 6,950 reis equals £1; therefore, 1 milreis (1,000 reis) is equal to 70 cents in United States currency.

At the present moment, Portuguese silver is about 10 per cent higher than the figures above quoted; but the exchange will drop back to the normal figures quoted before long.

W. STANLEY HOLLIS,

LOURENÇO MARQUEZ, *February 17, 1899.*

Consul.

TAXES IN MADAGASCAR.

Consul Gibbs, of Tamatave, on February 3, 1899, writes:

I give below the text, with translation, of a decree creating a tax of "octroi de mer" on goods coming into the island of Madagascar and dependencies. This tax takes the place of the so-called "taxe municipale," and will take effect on and after February 1, 1899.

REGULATION.

ARTICLE I. A tax of octroi de mer of 1 per cent ad valorem is established in Madagascar for the benefit of towns and centers enjoying financial self-government, on all goods from any country imported directly from outside and declared in customs for consumption.

ART. II. This tax is collected at all the ports of the colony open to direct importation: Diégo-Saurez, Tamatave, Fort Dauphin, Vohémar, Vatomandry, Tullear, St. Marie, Mananjary, Majunga, Nossi Bé.

ART. III. The proceeds of the tax of octroi de mer is paid to the treasurer for the account of the colonial budget and divided quarterly between the towns and administrative centers by decree of the governor-general passed in council of administration in accordance to the needs of these localities.

ART. IV. From the gross proceeds of the octroi de mer there are deducted for expenses of collection: (1) To the profit of the local budgets, 1 per cent; (2) to the profit of the employees of the customs, 2 per cent.

ART. V. The tax octroi de mer is paid to the colonial customs service, at the same time with the customs duties and various consumption taxes.

ART. VI. The value to be declared is that which the goods cost on the spot

where they are presented at the custom-house. It includes, besides the foreign purchase price, expenses after the purchase, such as export duties paid at foreign custom-houses, transportation or freight, insurance, etc.—in a word, all that contributes to form, on arrival, the market value of the object (the import duties not included).

ART. VII. Goods taken for consumption from any point whatsoever of Madagascar and accompanied by a pass of the custom-house from the point of embarkation are free from the tax.

ART. VIII. If the custom-house considers the declared value insufficient, it may request the appraisal of the goods by experts, who will be named one by the declarer, the other by the chief of the customs service of the locality. In the event of difference in opinion, or if the declarer requests it, the arbitrators will choose a third arbitrator. Their decision will be final.

ART. IX. The expenses of the arbitrators will be borne by the declarer if the value determined by the decision exceeds the declared value. In the contrary case, the cost will be deducted from the gross proceeds of the tax.

ART. X. The customs law is applicable in all provisions not contrary to the foregoing articles.

TRADE AND AGRICULTURE OF URUGUAY IN 1898.

The advance returns of commerce for 1898, giving general totals only, have been furnished by the statistical bureau of the Republic of Uruguay and present the following figures:

Importation.

Drinks in general.....	\$2, 666, 357
Comestibles, cereals, and spices.....	4, 347, 978
Tobacco and cigars.....	212, 389
Soft goods and materials.....	4, 992, 444
Ready-made clothing.....	1, 360, 909
Raw material and machinery.....	6, 410, 694
Various articles.....	2, 699, 734
Live stock.....	2, 093, 851
Total.....	<u>24, 784, 356</u>

Exportation.

Live stock.....	336, 925
Slaughterhouse products.....	26, 243, 492
Agricultural products.....	3, 315, 543
Other products.....	279, 497
Various articles.....	5, 356
Provisions for vessels.....	96, 101
Total.....	<u>30, 276, 914</u>

The export of most concern to the United States is that of agricultural products. It is seen that the total volume of these exports

gives a value of \$3,315,543, reaching again the figures of 1894 and 1895. From 1894 to 1898, agricultural exports were:

1894.....	\$3, 946, 625
1895.....	3, 725, 776
1896.....	*2, 018, 985
1897.....	†1, 202, 624
1898.....	†3, 315, 543

The list of exports covers about thirty different items, the chief ones being given below:

Wheat	\$2, 405, 716
Flour (wheat).....	601, 213
Corn (maize).....	170, 101
Total.....	3, 177, 030

Thus, out of a total of \$3,315,543, the items of wheat, flour, and corn take up \$3,177,030, leaving a small balance to be found in linseed (\$33,555), bran (\$26,919), shorts (\$17,662), etc.

Linseed is an increasing item of export. In round numbers, the products of the "estancias" in cattle, sheep, and grain amount to \$30,000,000 gold, and practically all are exported. This value will, under ordinarily favorable conditions, increase; and these exports are in more or less direct competition with the same products of the United States.

ALBERT W. SWALM,

MONTEVIDEO, *March 21, 1899.*

Consul.

MINING LAWS OF BRITISH COLUMBIA.

Consul Smith sends from Victoria, February 9, 1899, a copy of the placer mining act passed by the legislative assembly of British Columbia on January 18, 1899. This law, says the consul, is of special interest, in view of the discoveries of gold in the vicinity of Atlin Lake, as it prohibits the holding of claims by aliens. The law, with an amendment, and an act to provide for the settlement of disputes as to mining claims, the text of which were received subsequent to the date of Mr. Smith's report, are given below:

No. 4.]

[1899.

An act to amend the "placer mining act."

Her Majesty, by and with the advice and consent of the legislative assembly of the Province of British Columbia, enacts as follows:

I. This act may be cited as the "placer mining act amendment act, 1899."

* Great damage by locusts.

† Revolutionary troubles in the country.

2. Section 3 of chapter 136 of the Revised Statutes is hereby repealed and the following substituted therefor:

"3. (1) Every person who is not less than 18 years of age and is a British subject shall be entitled to all the rights and privileges of a free miner under this act, and shall be considered a free miner under this act upon taking out a free miner's certificate, as long as such certificate remains in force. A free miner's certificate shall not be transferable.

"(2) No joint-stock company or corporation shall be entitled to take out a free miner's certificate under this act unless the same has been incorporated, and not simply licensed or registered, under the laws of this Province, and unless such company or corporation is authorized to take out a free miner's certificate by the lieutenant-governor in council. Such authorization may at any time be canceled, and in case of such cancellation, such company or corporation shall not be entitled to take out a free miner's certificate under this act, but any free miner's certificate already taken out shall remain in force until its expiry. The word 'person' in this section shall include only such companies or corporations as aforesaid.

"(3) A free miner's certificate taken out by any person not authorized so to do by this section shall be null and void.

"(4) A free miner's certificate issued before the coming into force of this section, the holder of which is not a British subject, shall not entitle the person holding the same to take up, record, or acquire any interest in any claim under the 'placer mining act,' but such certificate shall be valid only with regard to claims recorded under the 'placer mining act' prior to the coming into force of this section, and as to which the holder of such certificate was, prior to the coming into force of this section, the owner, either wholly or in part. Any such certificate may be renewed, but such renewed certificate shall only be valid with regard to claims recorded under the 'placer mining act' under the circumstances in this subsection stated.

"(5) No free miner, after the coming into force of this section, shall hold any claim under said 'placer mining act,' or any interest therein, as trustee or otherwise, for any person who is not a British subject, or for any corporation not authorized to take out a free miner's certificate as above provided.

"(6) This section shall not apply to persons to whom the lieutenant-governor in council may, under the provisions of the 'placer mining act,' grant a lease for dredging, and for what is known as hydraulic mining, as distinguished from ordinary placer sluicing."

3. All the provisions in said chapter 136 as to the rights, privileges, and powers of free miners shall be subject to the provisions of this act.

No. 93.]

[1899.

An act further to amend the "placer mining act."

Her Majesty, by and with the advice and consent of the legislative assembly of the Province of British Columbia, enacts as follows:

1. This act may be cited as the "placer mining act further amendment act, 1899."

2. Sections 4 and 5 of chapter 136 of the Revised Statutes of British Columbia are hereby repealed, and the following substituted therefor:

"4. A free miner's certificate shall run from the date thereof and shall expire at midnight on the 31st day of May next after its date, or some subsequent 31st day of May. Only one person or joint-stock company shall be named in such certificate. The fee payable therefor shall be as provided in the schedule of fees to this act. Free miner's certificates may be issued by any gold commissioner or mining recorder."

"A free miner's certificate shall be in the following form:

"BRITISH COLUMBIA.

"FREE MINER'S CERTIFICATE.

"(Not transferable.)

"No. ____.

"This is to certify that ____ of ____, is entitled to all the rights and privileges of a free miner from midnight on the ____ day of ____, A. D. ____, until midnight on the 31st day of May, ____ A. D. ____.

"Issued at ____.

"____.

"(Signature of officer issuing same.)"

3. A person may, at any time prior thereto, and not later than the 31st day of May, or, if the 31st day of May is a holiday, then on the next day which is not a holiday, obtain from the proper officer, on payment of the proper fee, a free miner's certificate, running from midnight on the 31st day of May in any year to midnight of the 31st day of May next thereafter, or any subsequent 31st day of May.

4. In case any person should allow his free miner's certificate to expire, he may obtain from the proper officer, upon payment of a fee of \$15, a special free miner's certificate. Such special certificate shall have the effect of reviving the title of the person to whom it is issued to all mineral claims which such person owned, either wholly or in part, at the time of the lapse of his former certificate, except such as under the provisions of the "placer mining act" had become the property of some other person at the time of the issue of such special certificate, and shall operate as a free miner's certificate until midnight of the 31st day of May next after its issue. In the case of a company, the fee for such special certificate shall be \$300. Such certificate shall be in the following form:

"BRITISH COLUMBIA.

"SPECIAL FREE MINER'S CERTIFICATE.

"(Not transferable.)

"No. ____.

"This is to certify that ____ of ____, has paid me the sum of (fifteen or three hundred, as the case may be) dollars, and is entitled to all the rights and privileges of a free miner from midnight of the ____ day of ____, A. D. ____, until midnight of the 31st day of ____, A. D. ____.

"Issued at ____.

"____.

"(Signature of officer issuing same.)"

5. Sections 8 and 10 of said chapter 136 are hereby repealed.

6. All the powers conferred upon gold commissioners by said chapter 136 may be performed by mining recorders, with regard to mineral claims within the territory for which they have respectively been appointed.

7. The schedule of fees to be charged as provided in said chapter 136 is hereby amended as follows:

"For every free miner's certificate for a period for less than a year, a proportionate part of the fee charged for a certificate for a year.

"For abstracts and other certificates, such fees as the mining recorder may consider fair, subject to appeal to the minister of mines."

8. Nothing in this act contained shall affect anything done or suffered, or any right, title, or interest acquired or accrued before the coming into force of this act, or any legal proceeding or remedy in respect of any such thing, right, title, or interest.

9. This act shall come into force on the 1st day of May, A. D. 1899.

An act to provide for the settlement of disputes as to mining claims in the Bennett Lake and Atlin Lake mining divisions.

Whereas, on account of uncertainty as to the boundary between British Columbia and the Northwest Territory of Canada, and on account of the manner in which the recorder's office in the Bennett Lake and Atlin Lake mining divisions has been conducted, disputes are likely to arise as to the ownership of placer-mining claims in said mining divisions;

And whereas it is desirable that such disputes should be settled in a summary and inexpensive manner:

Therefore, Her Majesty, by and with the advice and consent of the legislative assembly of the Province of British Columbia, enacts as follows:

1. This act may be cited as the "Bennett-Atlin commission act, 1899."
2. The lieutenant-governor in council may appoint a judge of the supreme court of British Columbia a special commissioner for settling disputes and difficulties with regard to matters arising under chapters 135 and 136 of the Revised Statutes in connection with the Bennett Lake and Atlin Lake mining divisions.
3. The said commissioner shall have power to settle and dispose of in a summary way all matters which may be brought before him by the parties interested, and also all matters which may be referred to him by the lieutenant-governor in council, or by the government agent of the said district, touching the above questions.
4. The said commissioner shall not be bound, in giving his decision in connection with any of the above matters, by the provisions of said chapter 135 or 136; but, in view of the complications which have arisen in connection with said matters in said mining divisions, he may decide all such questions in accordance with equity and good sense. The said commissioner shall, however, so far as is possible, consistent with doing justice in the premises, follow the provisions of said chapters 135 and 136. The said commissioner shall not, however, give any decision which shall conflict with the provisions of the statute of the present session, taking away from aliens the right to locate, record, or own placer-mining claims.
5. The decision of the said commissioner, with regard to all matters so brought before him, shall be final and without appeal.
6. Any decision given by such commissioner shall be carried out by the government agent, gold commissioner, and all mining recorders and other officers of the Crown in said districts, and any such decision shall be considered an order of the supreme court of British Columbia, and may be proceeded upon in said court in the same manner as if the same were made in any action in said court.
7. Proceedings in connection with said matters shall be instituted by petition in writing, addressed to the said commissioner, setting forth the matters complained of, or by an order in council directing an inquiry into the matters therein specified, or by a request in writing from the government agent to inquire into matters therein specified. The said commissioner shall give directions that all persons who may be affected by his decision in any such matters shall have due notice of such proceedings, and shall have an opportunity of being heard in connection therewith.
8. The said commissioner, in any matter which is contested before him, may order costs to be paid by any party who may appear before him to any other party so appearing. The said costs shall be taxed and allowed by the said commissioner upon the scale allowed in the supreme court, with such modifications as may be considered fair by the said commissioner.
9. The lieutenant-governor in council may appoint such officers and clerks as may be considered desirable to act under said commissioner, and may provide the

remuneration to be paid said commissioner and such officers and clerks, and may also establish the fees to be paid to the Crown in connection with any such proceedings.

Consul Smith adds:

The loosely defined boundary between British Columbia and the Northwest Territory has caused considerable trouble since the discovery of the Atlin Lake gold fields. At first, they were believed to be in Northwest Territory; now, they are declared to be in British Columbia. I recently accompanied a party of American citizens to see the attorney-general of the Province in regard to their claims located and worked last year, recorded as in the Northwest Territory, but now included in British Columbia. The attorney-general said that the mistake of the gold commissioner in giving deeds for the claims could be rectified only by a suit at law; that the new law of British Columbia could not be waived, even in such a case, which is perhaps a sample of a hundred others. A special agent has been sent by the government, with instructions to denote the demarkation of the sixtieth parallel of north latitude and define the boundary between British Columbia and the Northwest Territory and the lines of the Atlin mining district.

In a communication dated January 13, 1899, the consul called the attention of the Department to the fact that the bill above quoted was under discussion in the assembly, and asked for an interpretation of the laws in regard to the holding of claims by aliens in United States territory. This question was referred to the Department of the Interior, and the answer is as follows:

TO THE SECRETARY OF STATE.

SIR: At your direction, the Third Assistant Secretary of State, in a letter of January 24, 1899, requests an official interpretation of that clause in section 2 of the act of March 2, 1897 (29 Stat., 618), entitled "An act to better define and regulate the rights of aliens to hold and own real estate in the Territories," which reads as follows:

"This act shall not be construed to prevent any persons not citizens of the United States from acquiring or holding * * * any mine or mining claim in any of the Territories of the United States."

The language of the clause shows that it was merely intended to place a precautionary limitation upon the general restrictions of that act, and not to affirmatively authorize the doing of something for which there was no authority outside of that act.

Section 2319 of the Revised Statutes, under which rights in and title to mineral lands may be acquired from the United States, is as follows:

"SEC. 2319. All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States."

This section forms a part of the mining laws of the United States, is applicable alike to all public mineral lands, whether situate in a Territory or in a State, and restricts the privilege of occupying and purchasing mining claims under such mining laws to "citizens of the United States and those who have declared their intention to become such."

The act of March 2, 1897, *supra*, is applicable only to the Territories of the United States, and prescribes when an alien may and when he may not "acquire title to or own any land in any of the Territories," and but for the provision of section 7 thereof it might be contended that the act applies to the acquisition of both public and private lands. Section 7 declares "that this act shall not in any manner be construed * * * to authorize aliens to acquire title from the United States to any of the public lands or to in any manner affect or change the laws regulating the disposal of the public lands of the United States."

While there is nothing in the act of 1897 which expressly or necessarily manifests an intention to repeal or alter the preexisting legislation contained in section 2319 and other portions of the public-land laws, the disposition and purpose of Congress to avoid any such consequence or result is clearly disclosed by the language employed in section 7. It seems, therefore, to follow that the act of 1897, in defining and regulating the rights of aliens to acquire real estate in the Territories, has reference only to lands the title to which has passed from the United States and become the subject of private ownership, and that it was intended that the privilege of acquiring rights in and to title to public lands should continue to be defined and regulated by the public-land laws.

By section 2321 of the Revised Statutes it is shown that the words "citizens of the United States," employed in section 2319, include "a corporation organized under the laws of the United States or of any State or Territory thereof," and thereby the privilege of occupying or purchasing mining claims under the mining laws is extended to such corporations.

By section 2 of the act of March 3, 1887 (24 Stat., 476), it was provided:

"SEC. 2. That no corporation or association more than twenty per centum of the stock of which is or may be owned by any person or persons, corporation or corporations, association or associations, not citizens of the United States, shall hereafter acquire or hold or own any real estate hereafter acquired in any of the Territories of the United States."

This act seems to have been amended and reenacted by the act of 1897, which omits, and thereby repeals, section 2 just quoted; so, any restriction which that section placed upon the acquisition of public lands by a corporation a part of the stock of which is owned by persons, corporations, or associations not citizens of the United States was removed by the act of 1897, and now a corporation organized under the laws of the United States or of any State or Territory thereof may, under sections 2319 and 2321 of the Revised Statutes, occupy and purchase mining claims from the Government, irrespective of the ownership of stock therein by persons, corporations, or associations not citizens of the United States.

The clause first above quoted from section 2 of the act of 1897, to which specific reference is made in the request for this opinion, does not confer upon aliens the privilege of occupying or purchasing mining claims from the Government under the mining laws.

Since the inquiry in response to which this opinion is given grows out of a report from the United States consul at Victoria, British Columbia, respecting the enactment by the provincial legislative assembly of an act limiting the privilege of placer mining to British subjects and joint-stock companies or corporations incorporated under the laws of that Province, your attention is called to section 13 of the act of May 14, 1898 (30 Stat., 409, 415), which provides:

"Sec. 13. That native-born citizens of the Dominion of Canada shall be accorded in said district of Alaska the same mining rights and privileges accorded to citizens of the United States in British Columbia and the Northwest Territory by the laws of the Dominion of Canada or the local laws, rules, and regulations; but no greater rights shall be thus accorded than citizens of the United States or persons who have declared their intention to become such may enjoy in said District of Alaska; and the Secretary of the Interior shall from time to time promulgate and enforce rules and regulations to carry this provision into effect."

The rights and privileges accorded by this section to citizens of the Dominion of Canada are confined to the district of Alaska and do not extend to any other Territory or to any State of the United States. It has been found impracticable thus far to promulgate or enforce any rules or regulations to carry this section into effect, for the reasons stated in the following portion of the regulations adopted June 8, 1898, under the said act of May 14, 1898 (27 L. D., 248, 267):

"By the laws of the Dominion of Canada citizens of the United States are, with all other persons over 18 years of age, permitted to lease mineral lands in British Columbia and the Northwest Territory upon the payment of a certain royalty to the General Government; but the laws of that Dominion do not authorize the purchase of mineral lands in British Columbia or the Northwest Territory.

"The existing laws of the United States do not make any provision for the leasing of mineral lands in Alaska either to citizens of the United States or to others, but they do provide for and authorize the purchase of such lands in Alaska by our own citizens.

"Since this section accords to native-born citizens of Canada 'the same mining rights and privileges' accorded to citizens of the United States in British Columbia and the Northwest Territory by the laws of the Dominion of Canada, and since, under the laws of the Dominion of Canada, the only mining rights and privileges accorded to citizens of the United States are those of leasing mineral lands upon the payment of a stated royalty, and since the laws of the United States do not accord to its own citizens the right or privilege of leasing mineral lands in Alaska, and since this section also provides that 'no greater rights shall be thus accorded' to citizens of the Dominion of Canada 'than citizens of the United States or persons who have declared their intention to become such may enjoy in such district of Alaska,' it results that for the time being this section is inoperative."

Very respectfully,

E. A. HITCHCOCK,
Secretary.

DIAMOND AND GOLD MINING IN MINAS GERAES.

The Department has received from Minister Bryan, under date of Petropolis, March 12, 1899, an account of the visit of the secretary of the legation, Mr. Dawson, to the diamond and gold mines and agricultural regions of the State of Minas Geraes. The following extracts are made from his report:

Minas Geraes is the most populous State in Brazil. It has 3,000,000 or 4,000,000 inhabitants, and its area is about 222,000 square miles. On account of its elevation, the climate is for the most part cool, temperate, and healthy. There is no winter in the ordinary sense of the word. The surface is a great plateau with a general

height of 2,000 to 4,000 feet above the sea. It is varied by an extensive river system and mountain chains, the latter rarely reaching an elevation of more than 6,000 feet. In the southern part of the State are several lines of railway, coffee is largely exported, immigration has been considerable, and the commercial conditions resemble those of the neighboring States, São Paulo and Rio de Janeiro. The northern part, including four-fifths of the area, is without railways and is more isolated, self-supporting, and characteristically Brazilian. In this region are found the diamond mines. It contains a large population and is one of the most prosperous parts of Brazil.

In mining, Minas is preeminent among the States of the Republic. It has produced and still produces by far the largest proportion of the mineral output of the country.

The route from Rio de Janeiro is by the Central Railroad, owned by the Federal Government. The main line extends to Barra de Pirahy, 67 miles, thence branching west to São Paulo and north to Minas. The latter line is standard gauge as far as Lafayette, 290 miles from Rio de Janeiro, and for the remaining 140 miles to Sete Lagoas is narrow gauge. It takes thirteen hours to cover the 290 miles to Lafayette and eight and one-half hours for the remaining 140 miles. I was gratified at seeing that the engines, passenger coaches, and sleeping cars were made in the United States. This railway does a large business, both passenger and freight. There are many large towns along the line, and the territory through which it passes is fertile and populous, and has great resources yet undeveloped.

DIAMONDS.

Diamantina lies 680 miles from Rio de Janeiro, and has from 6,000 to 8,000 inhabitants. As its name indicates, it is the capital and center of the principal diamond district of Brazil. It was founded in the last years of the seventeenth century as a gold-mining camp; in 1729, diamonds were discovered. These were at once declared State property by the King of Portugal, and for a hundred years mining of diamonds in Brazil was a Government monopoly. In 1832, the Brazilian Government legalized private mining. Before that time, the Government superintendents and contractors had worked the mines with gangs of imported slaves, and in a most short-sighted manner. The district shows the indelible results of such a régime. To this day, there is an enormous preponderance of negro blood, and immense deposits of diamond-bearing gravel are irrecoverably lost, because they have been covered with detritus of other workings.

There are six important diamond districts in Brazil.

(1) Diamantina.

(2) Grao Mogul, also in the State of Minas and 150 miles from Diamantina.

(3) The Chapada Diamantina, in the State of Bahia, which produces quantities of amorphous and black diamonds, used for making drills.

(4) Bagagem, 200 miles south and west of Diamantina. This was worked as early as the middle of the last century and produced the celebrated Estrella do Sulof, 254 carats; but the general results were unsatisfactory as compared with those of Diamantina and Grao Mogul. The district has been but imperfectly explored.

(5) Goyaz, in the State of the same name, near the River Araguaia, a navigable tributary of the Amazon.

(6) Matto Grosso, 100 miles north of Cuyaba, the capital of the State, and 1,000 miles west of Rio de Janeiro.

The first three districts lie on or near the crest of the great mountain chain of the Serra de Espinhaco, or its continuation under different names, which forms the watershed between the São Francisco, flowing north more than 1,000 miles before it turns toward the Atlantic, and those rivers which flow directly into the ocean between Rio de Janeiro and Bahia. It is the opinion of experts that these three diamond districts are all parts of a great diamondiferous region extending in a narrow belt along the crest of the serra and down its slopes for more than 500 miles. It is therefore probable that further discoveries may be expected in the intervals between the districts already productive. That in the vicinity of Diamantina the country rock, from which the diamonds have been washed by erosion into the beds of the streams, exists only in the central serra and not in the side mountain chains, is proved by the fact that diamonds have been found in all, or nearly all, of the streams which flow into the left side of the Jequitinhonha, and none in those flowing into the right bank. The Jequitinhonha is the most famous of all the diamond rivers, and the most extensive and successful operations in Brazilian diamond mining have been conducted in it and its upper tributaries.

Four distinct kinds of diamond mining are practiced in the Diamantina district. The first is the most ancient and simplest. Near the top of the serra the small streams are very steep in their descent and have precipitous rocky sides. Their beds are filled with boulders, and in the interstices the diamond-bearing gravel is found. This gravel is called the "formacao," and is easily recognized by an experienced miner, for the reason that it contains certain minerals whose presence indicates the diamond. The diamond is a heavy mineral, its specific gravity being about 3.6, much greater than that of ordinary rock. When the mother deposits in the high serra were

eroded and washed into the streams, the diamonds and other heavy minerals were separated from the bulk of the detritus by the action of the water. The heavy gravel thus left at the bottom and caught among the bowlders is the "formacao." There are more than thirty minerals, some of which are always found in it. Among them are tourmaline, specular iron, disthene, rutile, gold, and various phosphates. The presence of these shows that the existence of the diamond among them is probable. The "formacao" is prospected for in the dry season, and as soon as found is dug out and piled near by the water. When the rains interrupt the digging, the miners work up the gravel. The operation is very simple. The gravel is first washed in a "bacu," an excavation a yard wide and a yard and a half long on the bank of a pond or stream. Its lip is a few inches above the surface of the water and it deepens slightly to the rear. A cubic foot or more of gravel is placed in the back end and the workman dashes water against it out of a large concave wooden plate, giving it a peculiar rotary fling. This rapidly separates the lighter and larger stones from the smaller and heavier ones. When concentration by this rough method is as complete as possible, the gravel is worked with the "batea." This unique instrument is a wooden dish about 30 inches in diameter, with a sort of pit at the bottom. Filling the "batea" with the concentrate and water, the workman agitates the contents, whirling and shaking them, meanwhile pouring and scraping the lighter gravel from the top as fast as he separates it. The operation is very similar to old-fashioned gold panning, but requires even greater skill, on account of the danger of losing diamonds. It is said that a man may be a first-rate gold panner and yet be useless for diamond washing. At the end of the process, the diamonds are simply picked out by hand from the remaining minerals. Their peculiar luster makes them easily recognizable even by a tyro. The Brazilian method of washing alluvial gold is substantially that described above. By its use, practically all the diamonds and placer gold which Brazil has produced have been obtained. The native Diamantina miners know no better method.

At present, the small stream washings in the Diamantina district are not important or productive. Two hundred years of search has exhausted most of them. Those who work them are usually men with little or no capital. They go in small parties and work somewhat at random, trusting to the chance of finding virgin gravel and making a rich haul. The rewashing of ancient concentrates of the old workings is also extensively pursued.

The second method of mining is that practiced in the beds of the larger streams. The opening of one of these mines is an extensive

and complicated undertaking, requiring the employment of thousands of dollars and hundreds of men. At the beginning of the dry season, a spot is selected which is believed from tradition or ancient documents to be virgin. Just above the spot selected, a rude dam is erected and also a sluice around it, through which the waters of the river are turned. The bed thus exposed is usually found to be of sand, largely the detritus of ancient workings. This sand is carried out a shovelful at a time in little wooden pans on the tops of negroes' heads. Naturally, such a process is tedious and expensive. The work could be done many times more cheaply and quickly with dump carts or even with wheelbarrows. From time to time, attempts have been made to introduce them; but they have not been successful, owing to the conservatism of the native miners. The excavation is often carried to a depth of 30 or 40 feet before bed rock, where the "formacao" is to be found, is reached. The hundreds of workmen climbing the slopes of the hole in long lines, each balancing a pan of earth upon his head, look like ants following their paths in and out of a hill. The work is done in great haste, because the first considerable rains in September or October wash away the whole structure and fill up the excavation. The water that percolates into the pit is pumped out with rude pumps worked by overshot wheels, a portion of the river being diverted from the sluice for this purpose. These pumps are simply wooden tubes, in which work leather buckets' opening upward. A stream of water is kept continually pouring down from the top to keep them running, otherwise they would not draw. The construction of the sluice, dams, and wheels shows considerable primitive engineering skill. No nails or iron are used. The joints are mortised or bound together with vines. The builders have no idea of exact measurements, even the slope of the sluice being determined by the eye alone. Nevertheless, such is their inherent skill that their work nearly always serves its purpose. However, they are unequal to difficult and novel problems. For example, one famous spot in the Jequitinhonha called the "Pocao (pothole) de Moreira," reputed to be virgin and fabulously rich, was unsuccessfully attempted several times in the early part of this century. Every time before the bottom was reached the rains came and destroyed what had been done. A few years ago, Antonio de Lavandeyra, a Cuban engineer, by the use of modern methods and pumps, succeeded in reaching and uncovering the bed rock. The practical results were a good example of the discouraging uncertainty of diamond mining. Only four diamonds were found. It is now believed that one of the early contractors, in the good old days before the "formacao" in the Jequitinhonha had been covered up with sand, had exposed or dredged the spot and taken out all

the diamonds, and then had not thought it necessary to make any record of his doings for the Government or posterity.

The whole bed of this richest of all diamond rivers, from its source to Mandanha, some 50 miles below, has probably been worked. Below that point, the valley is too broad and the bed too much choked with sand to permit operations of the kind I have just been describing.

The gravel found is carried out of the excavation and placed in piles until the enforced leisure of the wet season gives a convenient opportunity to wash it. If the ground is virgin, the miners are likely to get a rich reward; if the gravel has been washed before, they lose all they have spent. The river mining is usually carried on by a local expert, who forms a company, to which his speculative neighbors and friends subscribe. No foreign capital is employed in it.

The third kind of diamond mining is from the "gupiaras," or deposits of gravel found on the slopes and sides of the valleys. The finding of these is largely a matter of chance. Some of them have proved wonderfully rich. From one, the "Gupiara da Lava-Pes," more than 160,000 carats were taken in one season. It covered an area of not more than 6 acres, and was probably the richest small deposit of diamonds ever found. Even this was not thoroughly worked over. Last year, two negroes doing a little casual washing on their own account one Sunday found 20 carats.

The fourth kind of mining is that in the conglomerates and beds of clayey rock which are found high up in the serra. These beds are almost certainly the source of the alluvial diamonds, in just the same way that quartz veins are the source of placer gold. Contraband miners discovered that they were diamondiferous. These daring fellows, mining by stealth and in small parties in the little streams, followed them up to their sources. To their surprise, they continued to find diamonds clear up to the top of the serra and finally in the country rock itself. The conglomerate, or clay, is, of course, far less rich than the alluvial gravel in which the gems have been concentrated by the action of water, but in compensation, the quantity is much greater. Much of it is hard and compact and difficult to work, but some is soft enough to wash away readily in running water. After the Brazilians had taken the diamonds out of the weathered surface, they proceeded to work the deeper deposits in the following manner, which is the only method they know:

They collected rain water in pools on the tops of the plateaus and led it by ditches to a favorable outcrop of the diamondiferous deposit, there cutting out great gullies in the soft rock. The action of the water separated the "formacao" from the bulk of the débris,

and this was further treated in much the same way as the alluvial gravel. This method was extremely slow and vexatious, because sufficient water for effectively washing away the masses of rock could only be collected a few days in each year. Ten working days is a good average for a twelvemonth, and whole seasons pass without a single day's washing. Nevertheless, fortunes have been made in this kind of mining; and some of these "chapada" mines, as they are called, have been continually worked for nearly a century.

A French corporation, the "Companhia da Boa Vista," has recently purchased a large tract of conglomerate-bearing plateau where mines already existed, worked as I have just described, 8 miles from Diamantina, and has undertaken its exploitation on a large scale and by modernized methods. Mr. A. Lavandeyra, an American citizen of Cuban birth, a graduate of the Troy Polytechnique School and formerly one of the engineers of the Panama Canal, is the managing director in charge. Their conglomerate is found near the surface of the "chapada," or plateau, of Boa Vista at an elevation of 4,300 feet above the sea. The installation now being completed consists, briefly, of a reservoir on one of the higher levels of the plateau, the water from which is to be conducted by pipes wherever it is needed for washing. This reservoir is connected by a pipe 10 inches in diameter with another reservoir half a mile away and 280 feet below the first. The latter is made by a dam across a small stream, which furnishes a constant supply of water sufficient for washing, but not large enough to run the pumps. These have a capacity of 90 liters a second and are operated by electric motors, which are connected by a wire running down the mountain side to a point 1,040 feet lower. Here is the power station in the valley of a large stream, the Santa Maria. The dynamos are operated by a 500-horsepower Pelton wheel, and this in turn by a pipe 20 inches in diameter, a mile long, and with a fall of 340 feet. It is supplied from a dam built across a narrow gorge of the river. The machinery for separating the diamonds from the washed conglomerate is specially constructed and was built in Europe.

This is the first and, so far, the only noteworthy attempt to apply modern scientific methods to diamond mining in Brazil. The engineering and practical difficulties which Mr. Lavandeyra has successfully surmounted have been very great. In engineering features, the plan is unique and original. The same conditions are to be encountered in no other kind of mining, and the methods of meeting them had to be thought out from the beginning. Even the diamond mining of South Africa affords no precedents. Skilled mechanics are unknown in the diamond district. Workmen have to be taught to use wheelbarrows or hammers and how to rivet pipes. There are no roads,

and the miner must build his own. The difficulties of transporting heavy dynamos and castings on wooden-wheeled ox carts over mountain trails for more than 100 miles are incredible. Iron working, except horseshoeing, is unknown in that region, so repairs and changes are impossible to be made on the ground. The Boa Vista Company had the pipe cut in short sections and brought up on mule back. The native miners are very incredulous as to the success of the enterprise. They can not understand how water can be carried in a little copper wire. Work was begun last March and is not yet finished. That the enterprise will be successful seems almost certain, unless the reasonable expectations of the company as to the amount of diamonds the conglomerates contain prove to be unfounded.

The electrical machinery was furnished by the General Electric Company, of New York. Should the Boa Vista mine be a success, it is sure to be followed by others, for there are many other diamond-bearing beds in the Diamantina district, and doubtless in the other districts as well. A large field for the sale of American machinery and for independent American enterprise would then be opened up. American miners are especially fitted for the work. The Boa Vista Company has, besides Mr. Lavandeyra, two American electricians engaged in the installation and operation of the electrical machinery.

Titles to diamond mines in Brazil are usually based upon discovery, registration, and the payment of a small fixed tax to the State. There is also a nominal requirement that a certain amount of work be done in the claim each year. Rights lapse upon failure to pay the tax or upon abandonment. Mining claims are very generally owned in the district. Nearly every man one meets has a claim which he is sure will make his fortune. The smaller miners roam almost at will over the country prospecting, and have the tacit encouragement of the owners. The latter, however, promptly assert their ownership and dispossess the squatters if these are fortunate in making a good find and unlucky enough not to be able to keep it secret. The owners get their claims prospected without expense.

The brute diamonds are usually sold by the small miners to buyers from Diamantina, who frequent the hamlets near the mines. Many are, however, brought directly to the city and sold to the general merchants. The prices of these rough diamonds vary largely with the fluctuations of the currency and with the quality and size of the stones and the necessities of the seller. Seventy milreis (\$10) a carat is an approximate average. Rezende & Co., of Rio de Janeiro, are the largest dealers. Practically all the stones which do not remain in Brazil are sent to Paris and London. Although the United States is the greatest diamond-consuming market in the

world, taking about one-half of the South African product, very few Brazilian stones are imported directly. I am inclined to believe that a favorable opportunity exists for diamond buyers from the United States to enter this market, instead of competing for them in Europe. Besides, this would benefit the diamond-cutting industry in the States. Brazilian diamonds are worth, on an average, nearly 50 per cent more than the Cape stones, being, as a rule, whiter. However, all colors are found, and the rose, wine colored, and blue varieties are much sought for and valued.

From the appearance of a brute diamond, little can be told as to its luster and freedom from flaws after cutting. A greenish exterior often indicates that the stone will cut white, but there is no certain guide. Therefore, the buying of rough stones is very speculative, and it is unsafe for even an expert to buy single uncut stones.

It is impossible to obtain exact information as to the present output of the Diamantina field. No statistics are kept, and the buyers are so numerous and scattered that they can not be reached. The same was true of the ancient production. The statistics which have from time to time been published by Europeans are merely estimates.

The extensive mining of diamonds in Brazil began in 1740, when the first lease was made by the Portuguese Government. The period of greatest production was between 1750 and 1770, under Caldeira Brant, sole contractor, and his successors. These contractors made a practice of concealing from the Government the amount of their production, and of using a greater number of slaves than that to which they were limited by their contracts. Tradition alone preserves an approach to the truth as to the extent of their operations. If it can be trusted, the production of 1740 to 1750 was not less than 50,000 carats a year, and that of 1750 to 1770, 150,000 a year. From 1771, when the Government began extraction on its own account, until that system fell into disuse, we have fairly trustworthy statistics of the Government production. But contraband mining flourished at the same time, and its extent can only be estimated. Between 1771 and 1795, the Government mined 40,000 carats a year. For the next ten years it fell to 20,000 carats a year. During this period, the contraband production was believed to be as large as the legal. From 1807, the disorganization of the Portuguese administrative system and the increasing sentiment of local liberty in Brazil, both largely due to the Napoleonic wars and the flight to Brazil of the royal family, sapped the efficiency of the Government "extraccao," and private mining gradually but completely took its place. During the present century, the production has varied from year to year. The freedom of mining has tended to increase it; but, on the other hand, alluvial mining has on the whole decreased with the exhaustion

of the easily worked beds and the known localities. This latter tendency has not been counteracted by the introduction of improvements in the method of working, nor by any great energy in searching for fresh fields. Sir Richard Burton, who visited Diamantina in 1867, reported it to be very prosperous and quotes an estimate, made by an exporter, of an annual production of 80,000 carats. The best local estimates of the present output approximate 25,000 to 30,000 carats a year.

Until thirty years ago, there was no diamond cutting in the district. It is now carried on extensively in Diamantina and the neighboring villages. The quaint little mills are supplied with power by overshot water wheels. The process of cutting does not differ from that employed in Europe. The machinery comes from Holland. The work is fairly good and very cheap. Most of the stones are cut into the brilliant shape. In this, they lose about 50 per cent. The rose shape, which is the more usual among European cutters, loses 15 per cent more by the making of an additional row of facets.

Another prosperous industry in Diamantina is the manufacture of gold jewelry. The workmen are mostly Portuguese. They are industrious and skillful. The designs are old-fashioned, and filigree is popular. The jewelry is peddled about the country and meets with ready sale, although relatively expensive. There would seem to be a favorable opening for the introduction of cheap and plated jewelry to compete with it.

My report upon the other mining industries of Minas will be somewhat meager, for the time at our disposal did not permit more than a cursory examination. At Diamantina our party visited the site of the existing washings and the old abandoned workings, which are much more extensive. At Ouro Preto we were shown through the school of mines by its professors and were given much valuable information. At Morro Velho we saw in operation the largest gold mine in Brazil.

GOLD.

The principal gold-producing territory of Minas begins 250 miles north of Rio de Janeiro and extends along the Serra da Espinhaco as much farther toward the north. Gold is found and mined in other localities, but the bulk of the past and present production of Brazil is from this district. The discovery was made in 1693 by slave hunters from the province of São Paulo, who were after Indians. There was an immediate inrush of adventurers, and by the beginning of the eighteenth century thousands of them with their slaves were scattered all over the territory which has since been so productive. Until 1760, the production continued to increase rapidly, in spite of the exorbitant and tyrannical exactions of the Government and the rude

and superficial methods of mining employed. At its maximum, it amounted to more than 320,000 ounces a year. After 1760 it declined, at first slowly and then after 1800 rapidly. The industry revived in the years following the independence of Brazil, in 1822, with the introduction of foreign capital and underground mining. While modern production has never been as extensive as that of the last century, it has been and continues to be fairly profitable and prosperous.

The earliest mining was from the placers in the beds of the small mountain streams. These were exploited in a manner substantially similar to that described above as used for diamonds. At first, the gravel was washed in small wooden or metal plates and the gold picked out by hand. Later, the "batea," a large wooden pan 2 feet or more in diameter, was introduced, probably from Africa by slaves. In this, a fairly complete separation of the metal was possible by the use of water and the familiar gyratory motion. When the bed of the stream was exhausted, the miners went up the sides of the valley finding deposits left in abandoned beds of the river or higher up the flanks of the hill. In following the lines of the mineral yielding gold, the miners finally came to the mother veins. In Brazil, these are often of friable material, which can easily be pulverized with the aid of running water, and the country rock on either side of the vein is also frequently of the same character. Where such veins were found, we encounter the ancient open mines that are so characteristic of Brazilian gold mining. Near Diamantina we visited some typical examples. It is evident that the old miners knew nothing of underground mining, and, except in rare instances, their excavations are open to the top. These great gullies were made with the assistance of running water, brought from considerable distances in canals carried along a high level of the mountain flank. The water was conducted to the point where the lower outcrop of the vein began, and, as it flowed, with the aid of a pick and shovel, the ore and surrounding material was cut away. This process was continued backward up the hill until the gully became so deep that the débris was unmanageable. The extent of some of these excavations is enormous. One at São Joao da Chapada, a few miles south of Diamantina, is 150 feet deep, 1,000 feet wide, and 2,000 feet long. The mass of material washed down was concentrated in the rudest conceivable manner. Even the use of the sluice was not understood, and in its place the gravel was given its first wash in a "canoa." This is merely a level section of the canal in which the gravel and débris is carried down. The water is allowed to fall into this level space over a lip a few inches high, and a workman stirs with a sort of rake the gravel at that point. Below the "canoa" there is an inclined

plane covered with hides laid with the hair up, in order to catch the gold that does not sink to the bottom. In addition to the loss of gold inevitable with such a system of washing, the miners labored under the disadvantage of being likely to lose their vein by the falling in of the side rock. And not only did they lose the clue, but it is lost forever. Many of these old mines are undoubtedly still rich, but the veins are so covered up by the débris that their outcrops can not be found and traced.

An interesting feature of the larger hillside mines are the "mon-deas," rectangular masonry reservoirs 50 to 80 feet square and 10 to 20 feet deep, made to catch and hold the material washed down by the canal from the mine until it could be conveniently worked. They were necessary where the amount of water was large. In the few instances where the old miners exploited veins for which no water was available, they simply dug a hole open to the sky, carrying out the mineral and earth upon the heads of slaves. They were almost never willing to lose sight of the vein.

The running of underground galleries and scientific mining did not begin until the Baron de Eschwege, a German expert sent by the Portuguese Government in 1815 to examine and report upon the mining industry, came to Minas and devoted himself to its development. While the enterprises he set on foot were not successful, he gave to the scientific and mining world valuable information concerning the gold deposits of Minas. After 1822, when Brazil became independent, the laws were made more liberal, and foreign companies were permitted to enter the field. With the formation of the Imperial Brazilian Mining Association in 1824, the company that afterwards owned the celebrated and rich Gongo Soco mine, began the introduction of foreign, and especially of English, capital. The major part of the exploitation since has been by foreign companies.

The gold-bearing mineral of Minas is principally of two kinds—quartz in veins and itaborites, or "jacutinga," a nearly pure peroxide of iron in beds. The quartz is sometimes of the ordinary free-milling varieties, white or smoky in color and little mixed with other mineral, or else in the form of quartzite. The principal mines in this kind of quartz are the Boa Esperanca, Carranca, and Juca Vieira, near Caethe, and the Banderinha, near Diamantina. The Juca Vieira has lately been producing about 600 ounces annually and the Carranca half as much. The other mines are even less important.

Of far greater importance than the free-milling quartz mines are those in veins where the quartz is mixed with pyrites. The vein of the Morro Velho, the largest mine in Brazil and one of the great mines of the world, is of this character. The ore is composed of fine-grained quartz and iron and arsenic pyrites, mixed with magnetite

and copper pyrites, siderose, and calcite. Over 2,000,000 ounces of gold have been extracted from this mine by the Saint John d'El Rei Company, an English corporation formed in 1830. Brazilians worked it during the last century, employing the old open method. It is related that when powder could not be obtained, fires were built and the hard quartz cracked by throwing cold water upon it. In 1818, the mine had been abandoned; but about 1830 it was bought by an Englishman, who sold it in 1834 to the present company for £56,000. The mine came into full operation in 1842, and from then until the great disaster of 1867 an annual dividend of 25 per cent was paid upon the capital of £135,000. In 1867, the shafts had reached a depth of 1,200 feet, but operations were interrupted by the burning out and falling in of the mine. The destruction was so complete that it was found necessary to sink two new shafts to the same depth as the former ones in order to reach the vein. The cost was £87,000, the capital stock being increased to £233,000 for this purpose. In 1874, the payment of dividends was resumed. They averaged 31 per cent until 1882, when difficulties with water began to be met with on account of the great depth (nearly 1,900 feet) the mine had reached. The ore also became less rich. In 1886 the whole mine once more fell in, and the ruin was again so complete that for the second time entirely new excavations had to be made. Mr. G. Chalmers, the present manager, undertook the work. He built a horizontal gallery 1,100 feet long and two new shafts, one 2,190 and the other 2,310 feet deep. These reach the vein 40 feet beneath the bottom of the old mine. Mr. Chalmers abandoned the old milling machinery and has installed a 100-stamp mill of California design and an extensive chlorination establishment, which has proved effective in reducing the refractory portion of the ores. Power is furnished by Pelton wheels operated by water collected by artificial canals from a wide area of mountain. At times this proves insufficient, and it is helped out by steam engines which burn wood cut in the neighboring forests. Since 1890, the mine has once more been profitable and the new capitalization of £233,000 completely freed. The ore now being extracted yields, under the scientific treatment employed, six-tenths of an ounce per ton. The annual output is about 50,000 ounces. The form of the ore body is interesting to mining engineers. It consists of an oval swelling in a vein. The vein itself is vertical and the "chimney" is inclined at an angle of 45° in the vein. At the surface its outcrop is 800 by 60 feet. and it varies considerably in size as it descends, but always maintains an ample width. The average dimensions of the "chimney" are about 50 by 500 feet. Having such a large ore body in a single mass, the mine is unique in the tremendous extent of the open excavations from which the mineral has been taken.

This mine is situated 15 miles south of Bello Horizonte, the State capital, and may be reached from there on mule back over a romantic mountain trail. A more convenient route is from the nearest station on the Central Railroad, from which it is distant only a few miles by a wagon road. Of the employees, some seventy-five are English, and they have their tennis and cricket as if they were at home. Before the abolition of slavery, the company owned slaves. Thereupon an interesting question arose as to the propriety and legality of an English corporation's owning human flesh and blood, and it was even subject of diplomatic correspondence. But humanitarian scruples did not prevail against the desire to make large dividends.

The second largest mine is the Passagem, near Ouro Preto. This city was formerly the capital of Minas, and the region of which it is the center was the richest in Brazil. The Passagem has also been worked since the last century. The ore contains a large proportion of arsenical pyrites, and it is from this that most of the gold is obtained. The quality is variable, and the mine has had a checkered history. In 1863 it was bought by an English company, and by 1873 they had extracted 23,500 ounces from ore yielding one-fourth of an ounce per ton. This was not profitable, and the company went into liquidation. In 1884 a new company, the "Ouro Preto Gold Mines of Brazil," bought the mine, and, with better methods of exploitation and reduction, the Passagem has justified its old reputation of being one of the best in the country. The ore averages one-third of an ounce per ton.

The best example of a mine where the gold is obtained from beds of peroxide of iron, called "jacutinga," a soft friable brown mineral, is the Gongo Soco. This mine is situated about 50 miles east of Morro Velho and high up on the ridge of the main serra. It was discovered and worked before the middle of the last century. Stories that sound like fables are told of its marvelous richness. In 1818, the Brazilian proprietor took out over 5,000 ounces of gold in one month. In 1826, the mine was sold to an English company for £74,000. The mineral is found in a bed 300 feet thick, interstratified between schistose slates and limestones lying at an angle of 45°. Much of the ore was so rich that the gold was plainly visible to the naked eye. Ore of this character was detached with picks, separated and powdered by hand, and then washed in pans. This work was intrusted only to the fifty English miners imported by the company. Five hundred slaves were employed in positions of less temptation. The Brazilian tales of the wonderful richness of the ore were more than verified by the experience of the English company. In one instance, a miner brought out in his hat half a peck of "jacutinga" which yielded 310 ounces of gold dust. The hat

must certainly have been one of the leather hats so universally used in the Minas mines to-day. The bulk of the ore was crushed in stamp mills and subjected to a more complicated process than the selected portions. The upper parts of the bed were the richest, and from 1826 to 1841 the mine produced largely and at small outlay. During the following fifteen years the production decreased and the expense grew on account of the flooding of the mine. It was at last abandoned in 1856, after having yielded 400,080 ounces of gold for a total outlay of £989,000. During the early and profitable period the Government levied a tax of 25 per cent of the gross product, and the company paid into the imperial and provincial treasuries over £333,000.

The Maquine mine, near Ouro Preto, the Pitangui, Cocaes, Boa Vista, and Morro das Almas, all near each other and 20 miles south of Santa Barbara, were other "jacutinga" mines of considerable value. None of them are being operated at present. Besides the Morro Velho and Passagem, there may be mentioned among the quartz and pyrites mines that of Pari, to the east of Santa Barbara; Catta Branca, directly south of Morro Velho; Cuiaba, owned by the Saint John d'El Rei Company; Faria, near the station of Honorio Bicalho, on the Central Railroad and owned by a French company; Raposos, near Sabara and belonging to the Passagem company; and Vira Copos. Most of these are in operation.

Shortly after the proclamation of the Republic in 1889, a considerable number of Brazilian companies were floated for the purpose of engaging in gold mining in Minas. The results so far have not been notable. There are undoubtedly large deposits of quartz and "jacutinga" yet unexplored, or which have not been worked because they have been covered up by early operations. Difficulties often arise on account of the impracticability of obtaining available water power sufficient to keep the mines free from the great quantities of water encountered in Brazilian mining. No coal is mined in Minas, and freight rates do not permit its importation so far inland; consequently, steam is unavailable for pumping, and there are no smelting works. Little Brazilian ore is free milling, and that which is not must be reduced by chemical processes. A large development of the mining industry of Minas is probable, but those alone who employ the safest and most scientific methods of exploitation and installation, and who command large capital, can reasonably hope to be successful. Mining in Minas offers few inducements for small prospectors.

The legislation in regard to the acquirement of mining property now in force is liberal, and the restrictions and formalities imposed are few and reasonable. The owner of land has the first right to the mineral; but if he does not exercise it, others may explore, after

giving notice. The discoverer of mineral is entitled to four lots of 50 meters square, with ground necessary for working. Claims are freely transferable, but no single person or company may own more than one hundred contiguous lots. Abandoned claims revert. The most onerous burden is the State export tax, amounting to 5 per cent of the gross product. The larger mines can not escape the payment of this tax, but there is much illicit exportation by small operators. This fact makes the gathering of complete statistics impracticable.

I investigated the historical data still preserved as to the gold production of Minas and inquired of the best local sources as to its probable present amount. Fairly complete statistics exist of the amount of taxes collected in colonial times. Since the Government took one-fifth of all the gold produced, the computation is easy. The output of the larger mines in this century is also known. The contraband production of the last century and that of the smaller private mines in this can only be estimated. The gold production of Minas has been approximately as follows:

Years, inclusive.	Per year.	Total.
	<i>Ounces.</i>	<i>Ounces.</i>
1700-1713	10,000	140,000
1714-1725	90,000	1,080,000
1726-1735	135,000	1,350,000
1736-1751	303,000	4,850,000
1752-1766	320,000	5,120,000
1767-1777	230,000	2,530,000
1778-1808	140,000	4,340,000
1809-1834	34,000	890,000
1835-1890	58,000	3,250,000
1891-1898	75,000	600,000
Total.....	121,400	24,150,000

OTHER MINERALS.

Next to the gold and diamonds, the manganese mines are at present the most important in Minas Geraes. They are near the town of Miguel Burnier, 311 miles from Rio de Janeiro on the Central Railroad. The ore is of good quality, containing 84 per cent of oxides of manganese. It is extensively shipped to the steel mills of Europe and America, and these mines are among the most important sources of this mineral, so essential to modern steel making. The best-known mine, the "Usina Wigg," shipped 20,000 tons to the Carnegie Steel Company, of Pittsburg, in 1896 and 1897.

Minas Geraes contains inexhaustible deposits of excellent iron ore; but the lack of coal prevents its being used, except for the manufacture of soft charcoal iron. Niter is found in considerable quantities in many localities. It has been commercially mined for over a

century. Mica, graphite, topaz, beryl, chrysoberyl, andalusite, rock crystal, coal in thin seams, and building stone in great variety are known to exist in this State. Specimens of all these and of many others less important may be seen in the museum of the school of mines at Ouro Preto. Probably, no part of the world contains such varied mineral wealth as the State of Minas Geraes. It is worth the practical investigation of American engineers and capitalists.

AGRICULTURE.

The agricultural possibilities of the State of Minas are worth close study. From its southern border as far north as we penetrated practically the entire surface, except the higher mountain chains, is arable. Upon the grassy plains of the upper plateaus thousands of cattle graze. They are large and well bred, and, indeed, I never saw better oxen than those of northern Minas. Even in the high serra, sugar cane, indian corn, rice, and bananas flourish in the sheltered valleys. The São Francisco Valley is a wooded plain interspersed with gravelly ridges and clear, continually flowing streams. Its elevation is from 2,000 to 3,000 feet above sea level, and the climate is therefore moderate enough for out-of-door labor by Europeans. The trees, except along the river banks, are small, and the forests are open, readily traversed, and easily cleared off. The soil is productive, although the methods of cultivation now employed are primitive. Plows and agricultural machinery are not used. For example, the culture of indian corn consists simply in burning off the underbrush from a new piece of land, the making of holes with a sharpened stick, the dropping of the seed therein and covering it, and finally the harvest. The ground is never cultivated, and the process is exactly the same as that employed a hundred years ago. Indian corn sells for about 30 cents a bushel. Sugar cane also grows without cultivation. Every farmer makes his own sugar and also manufactures rum. This is as strong as whisky and can be bought for 3 cents a quart wholesale. Other staple crops which we saw growing were rice, mandioca (from which the "farinha," one of the principal foods, is made), yams, sweet potatoes, and beans. These last are also universally eaten. Irish potatoes, rye, barley, and the vanilla bean are said to thrive. Cattle, pigs, and poultry of all kinds are everywhere abundant, and look as well as our own. Fruit is plentiful, excellent in quality, and the variety is very great. Oranges, lemons, bananas, mangoes, cajus, and abacatis are the most usual and most valuable; but there are dozens of other kinds. Horses do not thrive as well as do horned cattle, mules, and hogs. The Minas horses are, as a rule, small, and they are subject to a severe skin disease during the dry season. Proper care is said to prevent it. Sheep do well; but they are not bred extensively,

for the people have a prejudice against eating mutton. The southern part of Minas is one of the greatest coffee-producing districts in Brazil. North of the railway lines, it is cultivated only in quantities sufficient for local consumption. Considerable "mangabeira" rubber is produced for export, but this industry is as yet comparatively undeveloped. It is capable of being greatly extended.

Notwithstanding the fertility of northern Minas, the variety and usefulness of its crops, and its temperate and healthy climate, the exports of agricultural produce, except of rubber, are insignificant and are likely to remain so for some years to come. There are two principal causes—the characteristics of the inhabitants and the deficiency of cheap and efficient transportation to consuming markets. While hardy and vigorous, the people are conservative, and changes in their industrial habits and organization will make slow progress. The present system supplies local necessities, but is not adapted to extensive production, or for competition with countries which use modern methods on a large scale. In the districts not supplied with railways, such competition is clearly impracticable, and even in southern Minas the cultivation of indian corn for the Rio de Janeiro market is still in its infancy, notwithstanding the direct railway connection. The existing freight rates on some of the lines are low on maize and other articles; but the short time they have been in force, the unsuitableness of the varieties for long shipment, the export duties, and the lack of proper terminal facilities all tend to make the success of the experiment doubtful. Further, a large and constant supply of produce is a requisite for permanent cheap rates. The characteristics of the people and their circumstances make such an increase improbable. Among the circumstances I refer to may be mentioned that the "fazendas" are scattered, that the farmers have for generations produced only enough for local use, that they know nothing of machinery, and are not in the habit of paying close attention to economy in production or to the selection of the right varieties for export. The people live simply, their wants are few and easily supplied, and they therefore lack incentives to ambition and to change.

IMMIGRATION AND POPULATION.

So far, there has been no foreign immigration of importance into northern Minas. Its inhabitants are almost purely Brazilian. That immigration will soon turn to this beautiful and fertile region seems inevitable. For the present, it should be one of farmers and miners. It is only a question of time when the São Francisco Valley will be densely populated and immensely productive.

Even under the present relatively unfavorable conditions, the population and wealth of the State of Minas are rapidly increasing, and it offers a field for certain kinds of American trade that is well

worth cultivating. There is a fair opportunity for increasing or establishing a market for mining machinery, tools, spades, hoes, pick-axes, powder, lamps, barbed wire, cheap wines, picture frames, electrical apparatus, shoes, kerosene, cutlery, table and kitchen furniture, wood-burning cooking stoves, firearms, cigarette paper, toilet soap, writing paper, thread, sewing machines, clocks and watches, and patent medicines.

The people of Minas appreciate the importance of popular education. The centralized system of government formerly prevailing, the institution of slavery, and, more than all, the widely dispersed settlement of the population have prevented Brazil and especially such States as Minas from making as rapid progress as was desired; but the actual conditions were better than I had been led to expect and are rapidly ameliorating. For example, Sete Lagoas, a town of 4,000 inhabitants, has four primary schools and one normal. I was told that at least half of the population could read and write, and that the proportion was increasing. The children of the recently emancipated slaves participate freely in the educational advantages afforded. There is no color line in Minas, the bulk of the population being of mixed African and Caucasian blood, with a smaller proportion of Indian. Graduates of universities are highly esteemed, and the title of "doctor" implies the greatest distinction.

COTTON GOODS IN COLOMBIA.*

Cotton importations at the port of Barranquilla, Colombia, during the year ended June 30, 1898.

Class of goods.	England.			France.		
	Packages.	Kilograms.	Pounds.	Packages.	Kilograms.	Pounds.
Cotton bags.....	3	209	461			
Cotton cloths and domestics.....	1,908	342,295	754,624	294	13,689	30,179
Cotton blankets.....	249	19,252	42,443	210	16,233	35,787
Cotton bedspreads.....	166	15,501	34,174	93	5,628	12,407
Cotton linings, bogotanas, muslins, and trimmings.....	12,094	886,943	1,955,355	222	16,317	35,972
Cotton clothing.....	627	41,415	91,304	1,318	94,642	208,648
Cotton prints and colored drills.....	12,277	996,951	2,197,878	1,984	157,812	347,912
Cotton shawls and handkerchiefs.....	816	63,004	138,899	88	7,453	16,431
Cotton ruanas.....	136	4,259	9,389	28	2,323	5,121
Cotton and linen towels.....	43	3,640	8,025	19	1,672	3,686
Cotton thread.....	1,453	94,809	209,016	97	6,579	14,504
Cotton twine.....	3	189	417	8	1,492	3,289
Cotton elastic.....	7	509	1,122	25	1,799	3,966
Total.....	30,782	2,468,976	5,443,107	4,386	325,639	717,902

* The above report was made in answer to inquiries by the director of the Philadelphia Museums, to whom Advance Sheets have been sent.

Cotton importations at the port of Barranquilla, etc.—Continued.

Class of goods.	Germany.			Holland.		
	Packages.	Kilograms.	Pounds.	Packages.	Kilograms.	Pounds.
Cotton cloths and domestics....	112	9,578	21,116			
Cotton blankets.....	316	22,580	49,780	1	61	134
Cotton bedspreads.....	51	3,734	8,232			
Cotton linings, bogotanas, muslins, and trimmings.....	94	5,398	11,900			
Cotton clothing.....	1,796	49,664	109,489	5	92	203
Cotton prints and colored drills.....	1,166	92,784	204,552	1	84	185
Cotton shawls and handker- chiefs.....	89	6,112	13,475			
Cotton ruanas.....	260	24,455	53,913			
Cotton and linen towels.....	21	1,585	3,494			
Cotton thread.....	16	1,488	3,280			
Cotton twine.....	2	108	238			
Cotton elastic.....	55	4,227	9,319			
Total.....	3,978	221,713	488,788	7	237	522

Class of goods.	Italy.			Spain.		
	Packages.	Kilograms.	Pounds.	Packages.	Kilograms.	Pounds.
Cotton cloths and domestics....				1	23	51
Cotton blankets.....	134	6,032	13,298			
Cotton bedspreads.....	9	329	725			
Cotton clothing.....	278	17,547	38,684	64	5,595	12,335
Cotton prints and colored drills.....	1,249	97,655	215,290	37	3,416	7,531
Cotton shawls and handker- chiefs.....	5	343	756	1	34	75
Cotton and linen towels.....	2	150	331	3	135	298
Total.....	1,677	122,056	269,084	106	9,203	20,290

Class of goods.	United States.			Total.		
	Packages.	Kilograms.	Pounds.	Packages.	Kilograms.	Pounds.
Cotton bags.....				3	209	461
Cotton cloths and domestics....	810	64,803	142,865	4,125	430,388	948,835
Cotton blankets.....	224	12,649	27,886	1,134	76,807	169,328
Cotton bedspreads.....	11	788	1,737	330	25,980	57,275
Cotton linings, bogotanas, muslins, and trimmings.....	304	20,007	44,107	12,714	928,665	2,047,334
Cotton clothing.....	23	1,461	3,221	4,111	210,416	463,884
Cotton prints and colored drills.....	1,496	276,548	609,678	18,210	1,625,250	3,583,126
Cotton shawls and handker- chiefs.....	2	157	346	1,001	77,103	169,982
Cotton ruanas.....	7	515	1,135	431	31,552	69,558
Cotton and linen towels.....	7	411	906	95	7,593	16,740
Cotton thread.....	75	5,383	11,867	1,641	108,259	238,667
Cotton twine.....	41	2,718	5,992	54	4,507	9,930
Cotton elastic.....	1	32	71	88	6,567	14,478
Total.....	3,001	385,472	849,811	43,937	3,533,296	7,789,504

The following small importations are not included in the above table:

Articles.	Quantity.		
	Packages.	Kilograms.	Pounds.
<i>From Colon, a free port of Colombia.</i>			
Cotton muslins, drills, bogotanas, and trimmings.....	13	856	1,887
Cotton clothing.....	19	2,027	4,460
Cotton shawls and handkerchiefs and towels.....	4	332	732
<i>From Austria.</i>			
Colored cotton textiles.....	15	1,137	2,507
<i>From Belgium.</i>			
White cotton textiles.....	1	127	281

Of these cotton importations, it will be observed that England furnished about 69.81 per cent; the United States, about 10.89 per cent; France, about 9.21 per cent; Germany, about 6.26 per cent; and Italy, about 3.42 per cent. Austria, Belgium, Holland, and Spain are credited with insignificant shipments; but, since many goods from Austria, Belgium, Spain, and other European countries reach this market through German and English ports, the importations for the last-named countries can not be treated as entirely of English and German manufacture.

Ordinary piece goods should be of the following widths and lengths: Common drills should be 22 to 24 inches wide in pieces of 30 yards; better drills should be 26 inches wide in pieces of 30, 40, or 50 yards; "osnaburgs" (coletas) should be 22 inches wide in pieces of 35 yards; bogotanas may be 21 or 30 inches wide in pieces of 20 yards; cheap prints may be 21, 22 $\frac{1}{4}$, or 24 inches wide in pieces of 30 yards even; better prints should be 24, 25, or 29 inches wide in pieces of 30 yards even; muslins should be 31, 32, or 35 $\frac{1}{2}$ inches wide and should be put up in pieces of 20 yards; sheetings should be 69 or 70 inches wide in pieces of 30 yards. Dress goods should be put up in single patterns of the following lengths and widths: Thirty inches wide in pieces of 10 yards; 24 inches wide in pieces of 12 yards; 20 inches wide in pieces of 15 yards.

While a large quantity of fine cotton textiles is sold here, there is a much greater demand for the cheaper and more ordinary grades. As will be observed, England exports by far the largest proportion of such goods to this market, and I will therefore first call attention to the character and prices of some of the most popular cotton textiles received from that country.

A common drill, 48 threads to the inch, 23 $\frac{3}{4}$ inches wide, such as is sold here for 20 centavos (5.8 cents gold*) per vara of 32 inches, costs in Belfast, exclusive of freight, duties, and other expenses, 4s.

* In making reductions throughout this report, the consul values the peso at 29 cents United States gold. The peso, according to United States Treasury valuations, is worth 43.4 cents United States gold. The latter is for the silver peso, while the consular valuation must refer to the paper peso.

(97.3 cents) per piece of 30 yards. The wholesale price here is 6 pesos (\$1.74 gold) per piece. Retailers sell by the vara. Another drill, 48 threads to the inch, 22 inches wide, such as is retailed here at 30 centavos (8.7 cents gold) per vara, costs in England 4s. 6d. (\$1.09) per piece of 30 yards; wholesale price here, 8.50 pesos (\$2.40 gold) per piece. A better drill, 50 by 50 threads to the inch, 23¼ inches wide, in pieces of 30 to 40 yards, and retailing at 40 centavos (11.6 cents gold) per vara, costs in Belfast 2d. (4 cents) per yard. A drill, 100 by 68 threads to the inch, 26 inches wide, put up in pieces of 30, 40, and 50 yards, is retailed at 60 centavos (17.4 cents gold) per vara, and costs in English markets 2½d. (5 cents) per yard. The wholesale price of such drills in this market is about 55 centavos (15.9 cents gold) per vara.

A cheap muslin, known in this market as "bogotana," 46 by 56 threads to the inch, 21 inches wide, put up in pieces of 20 yards, is retailed at 10 centavos (2.9 cents gold) per vara. It costs in Manchester from 1s. 4d. to 1s. 6d. (32 to 36 cents) per piece, and is sold here by the piece at from 1.80 to 2.10 pesos (from 52 to 60.9 cents gold) per piece. Another grade of the same, 64 by 72 threads to the inch, 30¼ inches wide, put up in pieces of 20 yards, is retailed here at 20 centavos (5.8 cents gold) per vara. It costs in Manchester from 2s. 8d. to 3s. 4d. (50.2 to 80.9 cents) per piece. The wholesale price here is from 4 to 4.40 pesos (\$1.16 to \$1.27 gold) per piece.

I mention two popular grades of "osnaburg," known here as "coleta," made in Dundee. One, 30 by 28 threads to the inch, 22 inches wide, comes in pieces of 35 yards. It is retailed at 20 centavos (5.8 cents gold) per vara. Such goods cost in England 8s. (\$1.94) per piece. It is sold here at wholesale at from 7.50 to 8 pesos (\$2.17 to \$2.32 gold) per piece. Another, 44 by 44 threads to the inch, 22 inches wide, put up in pieces of 35 yards, is retailed at 30 centavos (8.7 cents gold) per vara. This grade costs in England 9s. (\$2.18) per piece, and is sold here at from 9 to 9.50 pesos (\$2.61 to \$2.75 gold) per piece.

A good-selling cotton drill is one known here as "drill de borlon." I have examined a sample of such goods which came from Manchester. It contains 104 by 44 threads to the inch, is 26 inches wide, and is put up in pieces of 30 and 40 yards. This drill costs in Manchester 10d. per yard. The wholesale price here is 95 centavos (27½ cents gold) per yard, and is retailed at 1.20 pesos (34.8 cents gold) per vara.

I mention three grades of English (Manchester) muslins which sell well here. One, 70 by 84 threads to the inch, 31 inches wide, put up in pieces of 20 yards, the wholesale price of which in Barranquilla is 4 pesos (\$1.16) per piece, is retailed at 20 centavos (5.8 cents) per vara. Another, 72 by 84 threads to the inch, 32 inches

wide, put up in pieces of 20 yards, is wholesaled at 4.80 pesos (\$1.41) per piece. The retail price of such muslin is 25 centavos ($7\frac{1}{4}$ cents) per vara. A third has 60 by 80 threads to the inch, $35\frac{1}{2}$ inches wide, is put up in pieces of 20 yards, and is wholesaled at 5.60 pesos (\$1.62) per piece. It is retailed at 30 centavos (8.7 cents) per vara.

A good selling sheeting from Manchester is $69\frac{1}{2}$ inches wide. It has about 48 by 48 threads to the inch, is put up in pieces of 30 yards, and costs in England $7\frac{1}{8}$ d. (17.3 cents) per yard. The wholesale price here is 29 pesos (\$8.41) per piece; retail price, 32 pesos (\$9.28) per piece.

A common English print has about 62 by 76 threads to the inch, is 21 inches wide, in pieces of 30 yards. It costs in England 3s. (72 cents) per piece and is wholesaled at from 3.80 pesos to 4.20 pesos (\$1.10 to \$1.21) per piece. If desired, the English manufacturer puts up such prints in bales of 70 pieces, each piece being of a different pattern and 30 yards in length. These prints retail at about 15 centavos (4.4 cents) per vara. Another common grade of prints, 62 by 48 threads to the inch, $22\frac{1}{4}$ inches wide, put up in pieces of 30 yards, retails here at 15 centavos (4.3 cents) per vara. It costs in Manchester 3s. 4d. (80.9 cents) per piece. It is sold here at 5 pesos (\$1.45) per piece. Another, 52 by 64 threads to the inch, 21 inches wide, 30 yards in a piece, costs the same and is sold at the same price as former. A better print is $21\frac{1}{4}$ inches wide, in pieces of 30 yards, 60 by 56 threads to the inch. It costs in Manchester 3s. 8d. (88 cents) per piece. The wholesale price here is 5.40 pesos (\$1.56) per piece. The retail price is 20 centavos (5.8 cents) per vara. Some of the better grades of English prints are wider. One, 72 by 78 threads to the inch, 29 inches wide, in pieces of 30 yards, costs in Manchester 3s. 10d. (96 cents) per piece. The wholesale price here is 5.80 pesos (\$1.68) per piece. It is retailed at 20 centavos (5.8 cents) per vara. Another, 29 inches wide, 72 by 68 threads to the inch, in pieces of 10 yards, costs in England 1s. 8d. (40 cents) per piece. The wholesale price here is 2.50 pesos ($72\frac{1}{2}$ cents) per piece; retail price, 3 pesos (87 cents) per piece.

Lawns, about 66 by 72 threads to the inch, sell well. They are 28 inches wide and are put up in pieces of 10 yards. A popular grade of "bishop lawn" costs in Manchester 2s. 6d. (60 cents) per piece. It is wholesaled here at 3 pesos (87 cents) per piece. The retail price is 3.60 pesos (\$1.04) per piece.

SPANISH DRILLS.

I am told that in certain grades, Italian drills have largely taken the place of such goods formerly brought to this market from Spain. There are, however, considerable quantities of Spanish drills sold

here. A good grade in small checks, black and white, and blue and white, 88 by 88 threads to the inch, 26 inches wide, in pieces of 50 and 60 yards, costs 1 peseta* per yard in Spain. It is sold here by wholesale at 80 centavos (23.7 cents) per yard, and is retailed at 90 centavos (26.1 cents) per vara. A heavy Italian drill is 52 by 52 threads to the inch, 25¼ inches wide, put up in pieces of 40, 50, and 60 yards. It costs in Italy about 12½ cents gold per yard. It is wholesaled here at 75 centavos (21.7 cents) per yard. The retail price is 80 centavos (23.7 cents) per vara.

I am told that American prints are well received in this market; the colors are good, and some of the patterns take well. The patterns are not, however, assorted to suit this market; and while for the trade in this city it is not so important that prints should be in pieces of 30 yards even, for the interior trade this measure is much the best. In fact, for the entire trade in prints, our manufacturers would do well, I am told, to imitate the English manufacturer in putting up such goods in 30-yard pieces.

In addition to supplying retailers, importers sell many goods to private purchasers by the piece. A piece of print 30 yards in length contains three ordinary dress patterns. The buyer desires this length, and English and other European manufacturers are furnishing it. The lengths for the better class of dress goods have already been given.

As I stated in my last annual report,† a merchant here has said to me: "It is needless to make the request; your manufacturers will not cut these goods in lengths to suit this market." Notwithstanding the opinion of this merchant, American prints are decidedly popular, and when the patterns are good the fact that some of the pieces contain much more than 30 yards is not considered a serious objection. Owing, however, to the fact that the American exporter asks the merchants here to take assortments made up before the patterns are sent out (the bales frequently containing patterns entirely unsuited to this trade), the length of the pieces becomes an important question. A few unsalable pieces are more easily disposed of if they contain only 30 yards each; but if these bad patterns happen to be in pieces of as much as 62 yards, the merchant here has great trouble in selling them. If the American exporter would furnish from samples just such patterns as merchants here might select, and would duplicate orders for patterns desired (all of which English manufacturers do), the sale of American prints would be greatly increased. At present, owing to a rise in prices in the United States, I am told that orders which would otherwise have gone there are going to Europe.

* About 15 cents, at present rate of exchange.

† See *Commercial Relations*, 1898, Vol. I, p. 892.

As an evidence of the popularity of American patterns, European manufacturers are being asked to copy them at a less price than that asked in the United States. If merchants here wish bales made up of special designs, the American exporter asks a higher price. On the other hand, English manufacturers print special designs for this market, and I have been told to-day that Manchester mills are copying patterns of American prints at a lower price.

CREDITS.

The regular credit allowed by English houses is from three to four months. Some houses do not charge interest. Others charge from 4 to 6 per cent interest from the date of the invoice. German houses usually allow six months. For the first three months no interest is charged; after three months, the rate is 6 per cent. Nearly all European houses allow Barranquilla firms a discount of 4 per cent, plus 1 per cent for cash. These are regular rates, but it is claimed that some European houses frequently allow eight and even twelve months. I am informed that American houses seldom grant more than from two to three months' credit, and charge 6 per cent interest.

PACKING.

It is a frequent complaint that goods from the United States are not properly packed for this market. As it is easy to follow the more approved methods long since adopted by European countries, it is surprising that so many American exporters still fail to put up their goods in proper shape.

While it must be borne in mind that Colombian duties are levied on the gross weight of the package, and that therefore the weight of the packing material is a matter of importance, at the same time it must be remembered that this packing must be of a character to protect the goods, not only against very rough handling, but also against the ravages of insects, dampness, mud, and rain, to all of which many a package is likely to be subjected ere it reaches its destination in the far interior. I saw to-day at the warehouse of one of the large importing firms, bales of American drills which had been shipped with no more protection than a light bagging, secured by two iron hoops. The bagging was torn in several places, and was in many places worn through on the edges of the bales, thus leaving the goods entirely exposed to the dust and moisture. There was not even a heavy paper under the bagging. As a result, these goods were so badly damaged as to be entirely unsalable; and to protect himself, the merchant must have recourse to the insurance company, a most vexatious proceeding, requiring time and causing a great deal

of annoyance, all of which might have been avoided had the American shipper packed the goods in the proper manner.

I have myself examined many bales of textiles at the custom-house here, and have spoken with custom-house officials and merchants at this port concerning the methods in which goods from countries exporting to Colombia are packed. I am told that American packages frequently arrive so badly broken as to require repacking before they leave the custom-house, while the inside wrapping of many bales is often nothing more than paper, or paper and a cheap oilcloth which is by no means waterproof.

Bales and all packages containing goods which water will damage should be as near water-tight as possible. Oilcloth is not to be compared with tarpaulin as a material for wrapping packages. Water enters readily where the ends lap, and the cheap oilcloth is easily torn.

From my own observation and from reliable information, I am satisfied that all European countries pack goods better for this market than the United States does. Merchants tell me that English exporters pack textile goods in a satisfactory manner, and I have therefore examined such bales carefully, and have secured samples of the covering materials used. A bale of ordinary English textiles is first wrapped with a fairly strong paper. It is then covered with a light bagging, or burlap. The bale is next securely wrapped with heavy tarpaulin (encerado), and over all a heavy burlap is sewed. The ordinary bale is secured by two iron hoops. These hoops are about $1\frac{3}{4}$ inches wide by about three sixty-fourths of an inch thick. In this humid climate, iron exposed to the air is soon corroded by rust; and therefore, not only to prevent the rapid destruction of the hoop, but also to guard against possible damage to the bales from iron rust, these hoops are painted, and in many instances double slips of tarpaulin are placed under the bands at the corners of the bale to prevent the hoops from cutting the coverings. A bale well wrapped with good tarpaulin, and properly pressed, is not only practically waterproof, but is safe from the attacks of the "comejen" and other destructive insects which infect warehouses in this country. Oilcloth will not serve the same purpose as tarpaulin. Boxes, barrels, and kegs, as well as bales, from England, France, Germany, and Italy are generally wrapped with tarpaulin and covered with heavy burlap.

WEIGHT AND DIMENSIONS OF PACKAGES.

If the packages are to be opened at this city, or at points in the interior which are reached by river steamers, the weight and dimensions are not matters of importance. It must be remembered, how-

ever, that there are few railroads, and in most sections practically no wagon roads, in Colombia. Merchandise for inland towns away from the rivers must be transported on the backs of mules. The carga (load) for a mule on most routes is 250 pounds. Mules on the Medellin route take as much as 300 pounds. In order that the packs may be properly balanced on the animal, this load must be capable of being divided into two almost equal parts. While the bulk of a package can not be made to conform to any fixed rule, its dimensions should not greatly exceed the following, which I have taken from bales from Europe destined for points in the interior: 18 by 18 by 29 inches, 22 by 26 by 28 inches, 18 by 23 by 26 inches, 21 by 22 by 24 inches, and 12 by 14 by 28 inches.

GENERAL.

Of course, there are many grades of American cotton textiles sold here. I have not deemed it necessary to quote their prices in this report. The table shows the quantities and classes imported during the year named. As it is so insignificant in comparison with England's 2,468,976 kilograms (5,441,771 pounds), I have been led to secure prices of English textiles and have looked more particularly into English methods of putting up goods for this market.

I am told by merchants here that this trade is carefully served by the traveling representatives of the English manufacturers, who pay frequent visits to this city and to the principal points in the interior. They have become thoroughly acquainted with the requirements of this market and understand the business methods in vogue here. They are well supplied with samples, and often remain in this city several weeks at a time. They have learned that in this warm climate, buyers will take their own time and will not rush about to look at samples in order that the salesman may catch the next boat. They are, as a rule, experienced travelers, of good social attainments, who have improved their opportunities to build up a valuable social and business acquaintance here.

There are comparatively few American salesmen seen in this city. Those who do come realize, I believe, the necessity of extended visits.

I am satisfied that much, if not all, of the information I have gathered is or should be well known to such American exporters as have given their attention to this market. However, the number of inquiries addressed to this consulate evidence the fact that a goodly number of American manufacturers desire practical information on this subject.

W. IRVIN SHAW,
Consul.

BARRANQUILLA, *March 28, 1899.*

No. 226—11.

AXES AND DOLLS IN PARAGUAY.

The extensive trade in timber and the fact that the only fuel used in this country consists of wood and charcoal cause a considerable demand for axes. Official reports give the amount of the imports in 1897 as 12,640 kilograms, at the estimated value of \$4,170 gold. The duty levied on this article is 10 per cent ad valorem. The statistics for the year 1898 are not yet finished; but, according to general opinion, the figures for this year will far exceed those of the preceding.

Regarding the quality, it is obvious that instruments intended to fell and cut trees as hard as quebracho, lapacho, curupay, and iviraró must be of the very best steel. The superiority of American makes is recognized; from England come axes of a lower grade. Germany, up to the present, has not succeeded in selling any, but is sending samples, said to be of best quality.

Double axes have as yet not been seen in use. Collins' axes retail from \$8 to \$88 in Paraguayan paper (equal to about \$1.12 to \$12.32 in United States currency) a dozen.

The consumption of hatchets is very limited, as machetes are more used.

Dolls, especially of higher grades, seem to be a good article of importation. Although the official statistics for the year 1897 give an import of only 867 kilograms, with an estimated value of \$174 gold, I am convinced that the actual sales are far greater. The figures for 1897 may have been unusually small. One dealer in hardware has sold, in one of the last months in 1898, about \$300 worth of dolls, and imported more in the same year than is given above for all the stores in the city during the entire preceding year. The best class of dolls are in demand, selling at from \$4.50 to \$6 each.

Importers of the above-named articles are: Cramer, Weyer y Müller, Rius y Jorba, Trabucati y Cia., Crovato y Rodi—all in Asuncion.

A credit of six months is the general custom in this country, which term is sometimes lengthened to six months from sight, and sometimes shortened to four months, in which case a special discount is expected.

JOHN N. RUFFIN,
Consul.

ASUNCION, *February 28, 1899.*

COLONIZATION IN PARAGUAY.

Many inquiries reach this consulate in regard to the offers of land by the Government of Paraguay to immigrants. I would advise people of the United States to come prepared with money and agricultural implements, such as are used on the most advanced farms in the United States. Agriculture on a large scale would quickly repay investments. Tomatoes, especially, produced on a large scale, and potatoes, which mature earlier in this country than in those farther south, will find a profitable market in Argentina and Uruguay. I append copy of communications from the chief of the bureau of immigration. Letters in English can be sent to Mr. Carlos R. Santos. The Minister of Foreign Affairs, Señor Don José S. Decoud, also speaks and writes the English language. He was a member of the Pan-American Congress.

Spanish is the official language of the country. The people are intelligent and hospitable.

PRODUCTS.

Tobacco has been planted for many years with success, but, owing to the fact that ordinary seed was sown, export was almost impossible. This year, the better classes were selected, and the harvest promises to be good.

Cotton grows well, but is raised only in sufficient quantity to meet the demand of the people for a part of their personal dress. Spinning and weaving is done in the most primitive way.

Corn may be raised twice a year. The second crop, however, sown in December and January, will not be satisfactory every year. There are several different kinds of corn. That used for bread making, etc., is easily crushed and may be ground into meal by means of a coffee mill. The natives crush the grains with a stick in an excavation of a tree. Some colonists have made a simple mill out of two segments of a tree, the upper one turning; instead of grooves, the inner sides of the "millstones" are furnished with nails, which are not fully driven in. Another kind of corn is likewise brittle, but tough, and gives more resistance to grinding; it is broken into coarse pieces, which, when cooked, make a delicious dish. Another is the common corn, well known in the United States. The flour mills in Asuncion grind only wheat—no corn.

Mandioca is a fruit peculiar to Paraguay and the adjoining parts of Brazil. The stem of the plant is cut into small portions, which are planted like beans and yield a crop after four or five months.

The fruit grows under ground, like the Irish potato, but resembles in shape the sweet potato. Mandioca is called the bread of the Paraguayans, as it constitutes their daily food. It is largely used in the manufacture of starch.

Sugar cane grows everywhere.

Peanuts were raised in former years in considerable quantities, but now serve only for making sweets, by being boiled with molasses.

All sorts of beans and pease known in the United States grow well here. Butter beans yield well during two years. The variety known as "señoritas" has a marvelous production.

Rice is not planted sufficiently for the consumption of the country, although there are many tracts of land suitable for its growth.

There are a few coffee plantations, and others are projected. The bean is sold without difficulty.

Irish potatoes were planted last year with success by the European immigrants. They grow well and can be sold at a good price, as the imports are considerable; but all potatoes in South America are of an inferior quality to those raised in the United States.

Egg plants of considerable size appeared on the market this year for the first time.

All fruits known in the United States grow here, but only those that can not stand severe frosts, as oranges, bananas, etc., thrive well.

CATTLE.

The raising of cattle would be the most productive and secure investment in this country, as large numbers are imported from Brazil.

JOHN N. RUFFIN,
Consul.

ASUNCION, *March 7, 1899.*

LETTERS FROM CHIEF OF IMMIGRATION BUREAU.

ASUNCION, *February 27, 1899.*

MR. JOHN N. RUFFIN,
Consul of the United States of America.

I have the honor to acknowledge receipt of your note of the 18th instant, in which you have solicited my opinion respecting the possible establishment of North American colonies in Paraguay, at the same time asking some data relative to the principal products and land which would be destined for cultivation.

In answer, I am pleased to state that the Government of the Republic, believing that the future advancement of the country depends in great part upon the development of agriculture, has tried every means in its power to favor immigration and to create centers of production with practical and industrious elements.

In the parts of the north alongside the River Paraguay, there are considerable tracts of land adapted for agricultural and pastoral purposes, excellent for the object which is in view, having the advantage for exportation of their products of

easy communication, the river being continually navigated by boats that connect with the River Plata. There have been recently founded here two Italian colonies, one in Villa del Rosario, the other in San Pedro, the Government having given 20 square leagues of land to the first and 8 square leagues to the second, with the condition that thirty-five families should settle in each league. These receive their passages free from the port of Montevideo or Buenos Ayres. The same conditions can be obtained by any colonizing enterprise. Other facilities which the law accords are: Exemption from taxes for ten years; free introduction through the custom-house of baggage, furniture, domestic utensils, seeds, iron tools, and agricultural machines belonging to immigrants; expenses of disembarking and reem-barking; maintenance—board and lodging—for five days; also transportation to the place which the colony may have selected for its permanent residence.

I think, Mr. Consul, it is unnecessary for me to refer to the productive qualities of the land in general and to the salubrity of the climate, or to the favorable conditions, which are already well known. In brief, permit me to say that the position of Paraguay and its temperature do not differ much from the meridional States of the Union. The products which promise the best results you will find on pages 69 to 77 of the little book which I have the pleasure to send you.* Permit me to also mention india rubber, which grows in the north in a wild state and can be cultivated on a considerable scale.

I am, etc.,

CARLOS R. SANTOS,
Chief of Immigration Bureau.

MR. JOHN N. RUFFIN,
Consul of the United States.

ASUNCION, March 7, 1899.

In answer to the questions contained in your note of March 4, I have the pleasure to inform you as follows:

- (1) Titles of property, according to a recent law, can be obtained in two years.
- (2) The titles do not cost anything. As to land sold in the colonies of the State, the price is \$1 (about 14 cents) per 7,600 meters if in cash or \$2 if in ten annual payments.† If the Government grants a concession to any individual, he must agree with Government upon the price at which he would sell the land to the colonists.
- (3) Only colonies founded by the Government are entitled to pecuniary aid.
- (4) A house of the dimensions indicated in your letter, containing two rooms 13 by 15 feet each, will cost from \$120 to \$150 paper (\$17 to \$23), and will last six or seven years.
- (5) The Government has the right to diminish the number of families required for each league.

I am, etc.,

CARLOS R. SANTOS,
Chief of Immigration Bureau.

* La Republica del Paraguay, por Carlos R. Santos, Asuncion, 1898. Filed for reference in Bureau of Foreign Commerce.

† A statement giving the price of land in the different departments shows that the cost varies from \$180 gold per square league in San Pedro del Parana and Itú to \$25,000 in San Lorenzo del Campo Grande. The average is \$1,629. The statement in full has been filed for reference in the Bureau of Foreign Commerce.

RAILWAYS IN JAMAICA.*

The principal mode of travel in the larger part of the island, until the last few years, was by carriage, there being a network of excellent roads. For some time, there had been a steam railway, operated on the English plan, for a short distance from Kingston into the interior.

Some four years ago, this road was extended 113 miles northwest to Montego Bay and 75 miles northeast to Port Antonio, thus connecting the three principal towns of the island. The road was built by an American company. The government gave over the old road, made certain land grants, and guaranteed bonds. There was great friction and litigation growing out of government claims on account of construction, the company failed, and the government is now about to take over the railway. The cars are principally in the American style, and the locomotives also, except on the old portion of the line, where they still use English locomotives and compartment cars. Ordinary coaches for the masses are called third class, and the rate of fare averages 2 cents a mile. These cars have compartments cut off for a small number of first-class passengers, who pay an average of 4 cents a mile. The time occupied in making the run to Port Antonio is about four hours, and to Montego Bay about six hours. There is quite a little climb over spurs of the mountains.

For some years, there has been a horse railway in Kingston, but an electric road covering the lines of the old horse cars and other thoroughfares as well has just been completed. This new line has about 25 miles of track in and around Kingston, divided into three districts, viz, the lines north of the city, those east of the city, and those in the city. It is a private enterprise, started by Canadian capital, and is called the West India Electric Company. The government license is for a period of thirty years, renewable for further periods at the pleasure of the governor. The company pays 4 per cent of its gross earnings to the government, and assumes the maintenance of the roads and streets occupied by it to the extent of 18 inches on each side of the tracks.

The rates of fare on this road are 2d. (4 cents) for each passenger from any point within a district to another point in the same district by most direct route; that is, the fare is practically 2d. for each section of the line, and from the end of the line to the east, through

*The above report was submitted in answer to inquiries by a Chicago correspondent, to whom Advance Sheets have been sent.

the city to the end of the line north, would be three fares or 6d. (12 cents). In addition, the company reserves three front benches on each car, on which a first-class fare—3d. (6 cents) instead of 2d.—is charged.

Tickets are sold as follows: Seven 2-penny tickets for 1s. (24 cents), five 3-penny tickets for 1s., and ten children tickets, for under 12 years, for 1s.

Passengers are allowed to stand. There is no difference, in this respect, from conditions which prevail at home. There are no restrictions as to number of passengers carried, and the same complaints of overcrowding are heard. Cars run every fifteen minutes in the city. In addition to regular motors, this company runs market cars before 9 a. m. and after 5 p. m. for country people who carry produce. These cars are trailers, and the fare on them is 1½d. (3 cents).

LOUIS A. DENT,
Consul.

KINGSTON, *April 24, 1899.*

ORANGE GROWING IN JAMAICA.

In reply to inquiries by a Florida correspondent,* Consul Dent, of Kingston, under date of April 13, 1899, says:

I think that with proper management and capital, orange groves would pay. As yet, oranges are not cultivated in Jamaica. Two or three small places have been planted regularly recently, and the Boston Fruit Company has started a nursery on the north side. Some orange growers of experience have come here and done fairly well since the Florida freeze of 1894, but they have mostly been engaged in the buying and shipping of oranges. Few, if any, have purchased land and grown oranges.

The principal orange districts are in Saint Ann's and Manchester parishes, in the middle portion of the island. Land along the line of irrigation in Saint Catherine, nearer to Kingston, has been sold for as high as £15 (\$73) per acre. Land with marketable woods on it will pay in wood for the expense of clearing. Plenty of good land can, however, I think, be obtained at much lower prices than this. I know of one good estate of 1,000 acres for sale at £6,566 (\$32,032).

Towns of any size in Jamaica are far apart. There are many schools, but practically all for natives. Children of better classes of whites are educated abroad, though there are two or three good schools in Kingston, somewhat expensive. There are good

*To whom Advance Sheets have been sent.

facilities for shipping fruit to the United States, the steamship communication of Jamaica being the best in the West Indies, outside of Habana; it may be said to be even better than that of Habana. The shipping of fruit to London is yet an experiment, and an unsuccessful one. The Royal Mail steamers go every two weeks to Plymouth, taking seventeen days. The climate here is practically the same the year round. Frosts and freezes are unknown.

Not over 50 acres are granted by the Government to each settler. The prices are given below.

For—	Cash payment.		Annual payment for 10 years.	
			<i>Shillings.</i>	
5 acres.....	£1	\$4.86	12	\$2.91
10 acres.....	2	9.73	20	4.86
15 acres.....	3	14.59	28	6.80
20 acres.....	4	19.46	36	8.75
25 acres.....	5	24.33	44	10.70
30 acres.....	6	29.19	52	12.65
35 acres.....	7	34.06	60	14.59
40 acres.....	8	38.93	68	16.54
45 acres.....	9	43.79	76	18.49
50 acres.....	10	48.66	84	20.43

At the end of ten years, purchaser gets a free title. If purchaser, within ten years, establishes a permanent crop, such as coffee, chocolate, grape fruit, kola, oranges, annotto, etc., one-fifth of the price paid for the land will be refunded.

Satisfactory information as a basis for investment can hardly be well gotten, except through a survey of the place by an expert in the business.

NOTES.

The Paris Bourse of Commerce.—In reply to a Missouri correspondent,* Consul-General Gowdy writes from Paris, May 4, 1899:

The first regular bourse of commerce was established at Antwerp in 1531; Rouen followed in 1556, then Hamburg, London, Amsterdam, and finally Paris, in 1645.

As is usual in France, the Bourse of Commerce was created under the patronage of the chamber of commerce and at the request of various syndical chambers. The concession was granted for the present building by the city of Paris in 1886 (it standing on ground belonging to the town, on the site of the old corn exchange).

The building is owned by a company known as the Société Anonyme de la Bourse de Commerce, which collects rents from those holding offices, as follows: Ground floor—large offices with entries on the hall and the street, 9,000 francs (\$1,737) yearly; offices opening on the hall only, 4,000 to 6,000 francs (\$579 to \$1,158); entresol, 1,500 francs (\$289.50) per annum; first floor, 1,000 to 1,200 francs (\$193 to \$231); second floor, 800 to 1,000 francs (\$154.40 to \$193).

The secretary states that the average attendance on the trading floor is from 1,200 to 5,000, the latter number being reached on days when the grain dealers congregate. It is calculated that on these days, 10,000,000 francs' worth of business is transacted at the bourse. The articles chiefly traded within the building are sugar, oil, grain, seeds, flour, forage, and alcohol.

This business transacted in the hall of the Bourse of Commerce is under the control of the chamber of commerce, the company holding the lease of the building having no authority beyond the enterprise of leasing the offices.

The Bourse of Commerce is open to the public from 9 till 7, except on fête days, which are decided by the chamber of commerce.

Study of Commerce in France.—Consul Skinner writes from Marseilles, March 24, 1899:

The commercial organizations of France are doing all within their power to promote the study of foreign commerce and foreign

*To whom Advance Sheets have been sent.

languages and to overcome the national habit of indifference to the latter. To this end, the Society for the Defense of Commerce in Marseilles maintains a free commercial school, and the National Ministry of Commerce grants "purses for residence in foreign lands." Purses of the first category (4,000 francs=\$772 for the first year, 3,000 francs=\$579 for the second) are reserved for young men of not less than 16 and not more than 18 years who desire to establish themselves in some country beyond Europe and who, by virtue of the law of July 15, 1889, are relieved of the obligation of active military service if they reside regularly in foreign parts until they shall have attained 30 years. The purses of the second category (varying from 2,500 to 4,000 francs=\$482.50 to \$772) are for young men aged not more than 26 years, graduates of a high school of commerce, who, after having accomplished their military service, are desirous of completing, by a practical apprenticeship, their theoretical knowledge gained at the school. This year, two purses are to be granted for each category.

Educational Statistics in Russia.—Consul Smith, of Moscow, under date of March 24, 1899, sends the following statement of the universities in Russia, with the number of students in each:

University.	Students.	University.	Students.
St. Petersburg.....	2,634	Odessa.....	492
Moscow.....	3,693	Tomsk (Siberia).....	477
Kharkof.....	1,059	Juryeff.....	1,326
Kief.....	2,558	Warsaw (Poland).....	1,085
Kazan.....	781	Helsingfors (Finland).....	1,500

The number of high schools (not including the military schools) and lyceums is stated as follows:

Description.	Number.	Description.	Number.
Technical.....	7	Languages (oriental).....	2
Medical.....	2	Law.....	4
Philological.....	3	Veterinary.....	4
Ecclesiastical.....	7	Agricultural.....	3
Female.....	3	Art.....	1

Siberia has 2,501 schools with 80,002 scholars.

The expenditure for education in Russia in 1896 (more recent figures not having been published) was \$12,747,000. The complete report of Consul Smith has been sent to the Bureau of Education.

Electric Works in the Netherlands.—The following extracts are from a letter by Consul Listoe, of Rotterdam, dated April 6, 1899, to a Philadelphia correspondent (to whom the original has been forwarded):

There are only two electric tramways in operation in the Netherlands—the road from Vaals to the German frontier, under the management of the Aachener Kleinbahn Gesellschaft, a little over half a mile in length, and the line from The Hague to Scheveningen, something over 6 miles. The cars on the last-named tramway carry their own motors, as the trolley system is not allowed. Concessions of franchises must be obtained from the various city governments and from the State, when public highways are to be occupied. Some municipalities—Rotterdam, for instance—seem to be prejudiced against electric tramways; in others, however, concessions could doubtless be readily obtained. On the island of Walcheren, the project of building an electric line from Flushing or Middelburg to Domburg and Vere has long been agitated; but things move slowly in this country, and there would probably be a good opening for enterprise. People here have great respect for American energy. The field, however, should be personally inspected.

New Building Material in Germany.—Consul Warner writes from Leipzig, April 26, 1899:

My attention was recently called to an article headed "A new building material: Keramo," which appeared in the *Leipziger Tageblatt*, of which the following is the substance:

Under the name of "keramo," a new building material, composed principally of glass and manufactured at Penzig, Silesia, has been placed on the market. As far as known, this material is made from powdered glass waste, which is hardened by a special devitrifying process and combined by means of strong pressure. In this way, the transparency, brittleness, and fragility of the glass are destroyed, but other prominent properties—extraordinary hardness, stability against exposure to the weather, nonconduction of heat, noninflammability, insensibility to oil, grease, acids, etc.—are retained in this new material.

Keramo can be used with good results for wainscotings in the interior of buildings, for covering floors in houses, kitchens, washing rooms, verandas, balconies, etc., for rough casting of walls exposed to the weather, as well as for staircases which are to be fireproof. The color depends upon the color of the glass used in the manufacture. The price of keramo is about \$1.60 per square yard, and, so far, the trials which have been made with this product have been most successful.

Tramways in Gothenburg.—Consul Bergh, of Gothenburg, under date of April 6, 1899, says:

Referring to my report of September 26, 1898,* concerning street railways in Gothenburg, I have to inform the Department that the city council, at its last meeting, decided to purchase the franchise and stock of the Gothenburg Tramways Company for the sum of £70,000 (\$340,655). It has not yet been settled whether the city will build and manage the road itself, or lease the franchise to a Swedish or a foreign company. It has been proposed to organize a home company; but, owing to the present high prices paid for money, it is doubtful if this can be realized. A German company has offered to build and manage the electric tramways under certain conditions, but the council decided that these conditions were not sufficiently defined. I shall inform the Department as soon as a definite decision has been reached by the city council.

Artificial Cotton in Austria.—Consul Mahin, of Reichenberg, under date of April 21, 1899, quotes an account in a local newspaper of a process for making artificial cotton from the wood of the fir tree. It appears that the wood is reduced to thin shavings, which are placed in a washing apparatus, exposed to the influence of steam for ten hours. They are then subjected to a strong preparation of sodium lye and are heated under great pressure for thirty-six hours. The wood is now changed to pure cellulose, and to give this a greater resisting power some castor oil, caffeine, and gelatin are added. The substance is then put into an apparatus and made into threads, which are reeled.

The article concludes:

Artificial cotton can be produced so cheaply that the genuine article can hardly compete with it, and one can not say that it is a sham, for it is composed, exactly as the natural cotton, of pure cellulose.

Mr. Mahin adds:

In a country such as this, where forests of fir trees abound and are made perennial by constant replanting as the large trees are cut down, and where all the cotton used in the numerous factories must be brought from far India and the United States, such a device should be profitable.

Oleomargarine in Italy.—In reply to a New York correspondent,† Consul Jarvis writes from Milan, April 11, 1899:

The most important house for the manufacture of oleomargarine in this city is that of Chierichetti & Torriani, Vittoria 57, which also

* See CONSULAR REPORTS No. 219 (December, 1898), p. 571.

† To whom Advance Sheets have been sent.

has manufactories at Rome and Florence. Under a law passed August 3, 1890, and still in force, all artificial fat products employed as substitutes for butter, not made out of cow's milk, must be sold under the name of margarin. The manufacture and sale of margarin are subjected to strict regulations. Whoever intends to open a manufactory for oleomargarine must make an application to the syndico, stating the kind of materials used and the method of preparing the product. The manufactory must be subject to the inspection of the sanitary authorities, especially in regard to the quality of the oils used. Every factory is obliged to have a trade-mark of its own, filed and approved as the law requires, which, together with the word margarin, must be stamped on all the cakes of salable product, and on all the cases containing said cakes; also on each paper wrapper, and on the invoices, bills of lading, and books used in the administration of the factory. The retailers and all sellers are likewise subject to the inspection, and they must inform the buyer that the merchandise is not butter, and must put it up in cases or wrappers with the word margarin printed in big letters upon each. Whenever the local conditions make it advisable, the syndico of any locality can prohibit the sale of margarin or other substitutes for butter, in the stores where butter is sold.

Trade with Turkey.—Consul-General Dickinson, of Constantinople, under date of April 7, 1899, writes:

It may interest American manufacturers to know that the latest steamer of the new steamship line between New York and Constantinople brought three locomotives to Alexandria for the railway through the Soudan.

The effort to extend American commerce in Turkey is assuming such proportions that not only the newspapers of this region, but those of England, Germany, and Austria are sharply calling the attention of their readers to the fact that a new and dangerous commercial rival has entered this field. The high quality of American goods and the ingenuity and enterprise of American manufacturers and exporters are thoroughly appreciated in all European countries, and the result of a direct steamship service which will enable American products to enter these markets on nearly equal terms with their European rivals is readily foreseen.

The consul-general translates from a Vienna journal an article in regard to United States competition in Eastern markets, the substance of which was sent by a correspondent to the London Times and was published in CONSULAR REPORTS No. 225 (June, 1899), p. 245. Mr. Dickinson adds:

One of the results of this movement is great activity on the part

of merchants and brokers to secure the agency for American goods. American exporters should be informed that the selection of an agent to represent them in this region should be made with the greatest care. The agents should not only be responsible and honest, but they should not be engaged in other business which would lead them to give a preference to foreign products. Arrangements are now being made with parties in this city of unquestioned responsibility and character, to open a warehouse for the exclusive sale of American products, and the contracts already made provide that every effort shall be made, by advertising and otherwise, to introduce our manufactures and products throughout this region.

Wheat vs. Flour at Malta.—Consul Grout sends from Malta, under date of April 20, 1899, copy of the report of the committee which had been appointed to investigate the wheat and flour trade of the islands.* The committee recommends, in order to protect the local milling industry, that the duty on semola and other manufactured grain should be raised to 7s. 6d. (\$1.82) the cantar of 175 pounds, the present tax of 6s. (\$1.46) the cantar on flour of average quality to be retained; and that all adulterated flour should be subject to a surtax.

Mr. Grout adds:

I realize that Malta is but a speck upon the map as compared with other countries, but there is a market here for our wheat, which, if small, will at least prove a factor in the sum total of our trade. Since sending in my first report on the subject, I am happy to say that already one cargo of wheat has been landed here direct from New York, another is on its way, and a third is promised.

Proposed Cable to Iceland and Greenland.—The following, dated Copenhagen, April 27, 1899, has been received from Vice and Deputy Consul Blom:

The meteorologists in Europe have for many years desired a telegraphic connection with Iceland, Faroe Islands, and Greenland. Daily telegraphic reports from Iceland would be of the utmost importance to the weather service, as well as to the large fishing interests in the North Atlantic. I understand that the British fishing interests have recently petitioned the Government to grant a yearly subvention to the proposed cable. The Danish Government looks favorably upon the plan, but is of the opinion that it should be re-

*See CONSULAR REPORTS No. 224 (May, 1899), p. 100. The full text of the committee's report has been filed for reference in the Bureau of Foreign Commerce.

alized by private individuals. The Great Northern Telegraph Company, Limited, of Copenhagen, is willing to lay and work the cable, provided it is guaranteed a certain sum from the various governments and other parties interested. The royal Danish meteorological office, in Copenhagen, has issued circulars to kindred institutions throughout the world, requesting them to subscribe to daily weather bulletins from Iceland and Faroe Islands; the matter is also being seriously considered by other bodies, especially in Great Britain, and the prospects for a realization of the enterprise are promising.

Telegraphs and Telephones in Madagascar.—In reply to a Pennsylvania correspondent,* Consul Gibbs writes from Tamatave, March 18, 1899:

The Morse open-circuit system is used here. The messages are received on rolls of tape, similar to the stock-quotation tickers in use on the New York and other American stock exchanges. There are about 1,200 miles of line and wire at present, and the net is being increased. The telegraph, connected with the Post-Office Department, is controlled by the French Government.

It is not thought possible to introduce any improved telegraph system into Madagascar, owing to climatic conditions. The present system is out of order about one-third of the time; so much so, that a bulletin as to its condition is published in the triweekly editions of the *Journal Officiel* of the island. There is a telephone, used principally by the Government offices. It is the Ader system. Business does not demand its general adoption by the commercial houses. I do not think conditions propitious for the successful establishment of telephone exchanges.

Any circulars relating to the introduction of enterprises into Madagascar should be in French, to receive attention. Commercial and speculative transactions are conducted almost entirely in this language.

Steamship Trust in Brazil.—Consul-General Seeger writes from Rio de Janeiro, March 29, 1899:

Since March 15, the freight rates established by the European steamship trust controlling the transportation between Brazil and the United States are 40 cents and 5 per cent prime per bag of 60 kilograms (132 pounds) between Rio and New York. Since last August, the freights have been raised and lowered and raised again to suit the purposes of the trust, till they have reached their present level. Whether they will remain there or not, depends on the view

* To whom Advance Sheets have been sent.

taken by the manager of the trust as to the ability of the coffee trade to stand another raise. There is coffee enough here for all the steamers belonging to the trust, and for the few American vessels that venture into this port; but, as a rule, the sailing vessels, not chartered by coffee importers, have to leave for the United States in ballast, and independent steamers seem to have been effectually blocked out of the Brazilian trade.

The trust has an agreement with the coffee shippers here to pay them a rebate of 5 per cent at the end of every six months, from the date of the agreement, on all freights collected; provided, however, that this rebate is forfeited in case the shippers give freight to any vessel not belonging to the trust, during the period stipulated. Through this arrangement, the trust controls the regular shippers, and American vessels go home in ballast.

It seems that these conditions should be brought to the attention of the leading merchants and capitalists in the United States, with a view of securing adequate action to remove the obstacles in the way of American enterprise and trade in Brazil.

Venezuelan Currency.—In transmitting the returns showing the value of exports declared for the United States at Puerto Cabello for the quarter ended March 31, 1899, Consul Ellsworth reports as follows relative to Venezuelan currency:

Venezuelan peso.—No coin of this designation is in circulation, but 4 bolivars pay all accounts of 1 peso, and it is still the custom to render accounts in pesos. The Treasurer of the United States has fixed the value of the bolivar, the monetary unit of Venezuela, at 19.3 cents, which makes the value of the peso 77.2 cents in United States currency.

Venezuelan dollar.—This is in actual circulation, and is of silver. It calls for 5 bolivars, and, calculating the bolivar at our Treasury valuation, the Venezuelan dollar is worth 96.5 cents. In rendering accounts, making invoices, purchasing products of the country, market values, etc., this dollar is not considered, it being well understood that the peso is the basis of calculation; but in paying accounts, etc., it is taken at its face value—5 bolivars (96.5 cents United States).

Banana Trade of Nicaragua.—Under date of May 10, 1899, Consul Sorsby, of San Juan del Norte, writes:

The fruit trust, operating in the West Indies and Central America, the principal associates of which are the Boston Fruit Company, of Boston, Minor C. Keith, of Costa Rica, and others, have entered the

banana fields of the Department of Zelaya (Bluefields and Rama districts), Nicaragua. Their representative, Mr. J. Lamotte Morgan, arrived at Bluefields on the 28th ultimo and, going into the heart of the banana district, secured contracts from nearly all of the larger planters. Mr. Morgan tells me that it is the purpose of his people to put on a line of steamers immediately, with the view of controlling all of the banana trade of Nicaragua. The advent of this new corporation will probably have the effect, at least for the present, of advancing the price of bananas and cheapening freights on incoming and outgoing cargoes. Mr. Morgan states that the freight and passenger service of the new line will be in every respect superior to that of the old company, and it is probable that a small but fast steamer will be run as an auxiliary between Port Limon, Costa Rica, and San Juan del Norte, Bluefields, and Cape Gracias, Nicaragua.

Breweries in Jamaica.—Under date of April 29, 1899, Consul Dent, of Kingston, writes to a Chicago correspondent* as follows:

There are no breweries, as we know them at home, in the island of Jamaica. One was established in Kingston in 1890, with a complete plant, and, after being in operation less than two years, failed. Since then, a number of so-called breweries have been started. Their process is the simple one of fermentation in several casks (three or four) of 50 or 100 gallons each. Last year, an attempt was made to form a stock company and start a brewery on a large scale, but this met with failure also. Barley pays a duty here of 8 cents per bushel. All malt and malt liquors pay a duty of 18 cents a gallon. The importations of ale and beer last year amounted to \$156,000. There might be room here for a practical brewery.

Rice Exports to Cuba.—Consul-General Lincoln, of Antwerp, on April 12, 1899, says:

I would invite the attention of our merchants to an item in the "digest of the invoice book" for the last quarter, submitted in my report of like date.† The item referred to is that of rice, of which a quantity amounting in value to over \$86,000 was shipped from here during the last two months to Cuban ports. This is rice imported from the East, cleaned, dressed, and prepared for the market

* To whom Advance Sheets have been sent.

† See Exports Declared for quarter ending March, 1899, p. 4.

here, and the business with Cuban buyers has been done principally by Hamburg houses.

It would seem, in case the Southern States can not supply the existing want for this article, that at least our merchants should have some hand in procuring the supply needed.

French Trade with Cuba and Puerto Rico.—Consul Jackson, of La Rochelle, under date of April 1, 1899, writes:

I have been asked to request the Department to publish in CONSULAR REPORTS that several exporting houses in this region desire to learn names and addresses of business houses in Cuba and Puerto Rico which purchase French goods, and the sort of goods. Information should be sent to this office.

Postal Money-Order Service with British Honduras.—Consul Avery, of Belize, under date of April 20, 1899, says:

On April 1, the system of interchange of postal money orders between this colony and the United States went into effect. To send a money order from Belize to any city in the United States has required from twenty-five to thirty days. While the money was paid here, the order was issued from London, upon the receipt of mail advices from this post-office, and then sent to the receiver in the United States. There is no bank in the colony, and merchants disliked to sell drafts for less than \$15. Even by registered mail, it was difficult to remit, for United States bills are scarce; but now, the safe and convenient system of direct orders has been adopted, with the usual charge for different amounts.

Salmon Canneries in British Columbia.—Consul Dudley, of Vancouver, under date of April 12, 1899, writes that a meeting has been held by the salmon canners of the Province to protest against the new regulations established by the Government of the Dominion, regarding the catching and canning of salmon. Incidentally, the assembly urged that the canners be allowed to purchase salmon caught in American waters, and to bring them into British Columbia free of duty. The establishment of additional hatcheries on the Frazer River, says the consul, will increase the run of salmon along the northern shore of the State of Washington. He adds:

Most of the fresh fish retailed in this city is imported from the

United States. The reason given for this is that the wholesale dealer can there procure any quantity of the kind of fish desired, while the business in the Province is not sufficiently organized to insure the variety needed.

Canadian Ocean Traffic.—Consul Brush writes from Clifton, April 29, 1899:

Urgent appeals are being made to the Canadian Government for improvements on the St. Lawrence River and gulf. The heavy losses in both the past few years have led the insurance companies to double their rates, the new schedule taking effect immediately. The high rates of insurance and the dangers of the route are diverting considerable ocean traffic to American ports, and further loss of traffic is imminent, unless the Government takes immediate steps to widen the channel through Lake St. Peter and establish new light-houses in the gulf.

New Freight Service to France.—Consul Thackara sends the following from Havre, under date of April 27, 1899:

I have to report, for the benefit of American shippers, that the *Compagnie Générale Transatlantique* is about to inaugurate an additional regular freight and emigrant service between Havre, Bordeaux, Pauillac, and New York, and vice versa. This service will be carried on by chartered English cargo boats, the first steamer being the *Woolloomooloo* of 3,521 gross tonnage, sailing from Havre May 9 next and from Pauillac May 12. The departures for the present will take place every three weeks, and the average time to New York from Havre, via Pauillac, will be fourteen days. The rates of freight, which will be considerably reduced, are subject to special agreement. I have been informed by one of the officials of the company that the tariff will be about one-half that of the regular rates. The emigrant service has not been perfected as yet.

Revised Regulations for Automobiles in France.—Consul-General Gowdy sends from Paris, April 28, 1899, a copy of the revised regulations for automobiles. In addition to those given in CONSULAR REPORTS No. 225 (June, 1899), p. 251, the following provisions are made:

Automobiles must be so constructed as not to allow any matter to escape which might cause explosions or unpleasant smells. They must be built so as not to frighten horses, so that nothing will obstruct the view of the driver, so that they may be lit up after dark, and the handles regulating the machinery must be so arranged

that the driver can work them without taking his eyes off the route he is following. Every vehicle must be provided with two distinct systems of brakes, each capable of shutting off automatically the force of the motor and bringing it under instant control. One at least of these systems must act directly on the wheels or axles in such a manner as to bring them immediately to a standstill. All carriages exceeding 250 pounds in weight must be able to reverse their machinery and run backwards. Foreign vehicles must be passed by the French authorities before they are allowed to run in France.

Glove Manufacture in Germany.—Consul Erdman writes from Breslau, under date of April 29, 1899:

The export of kid gloves from this consular district has amounted to \$736,587.67 per annum. The glove leather is tanned, dyed, and the gloves are cut at the factories here; but most of them are sewed by girls in Austria, especially in Bohemia. German girls have never been taught the art. There is now an arrangement by which free sewing schools will be started by the Prussian Government, one to be located in the province of Silesia and the other in the Rhine Province, where are located most of the glove factories, the sewing for which has been done in Belgium.

Embroidery School at Plauen.—Consul Monaghan, of Chemnitz, under date of April 15, 1899, reports that a school for teaching embroidery is about to be opened in Plauen. The Government has appropriated 9,000 marks (\$2,142) and the city 3,000 marks (\$714) for the initial expenses; 5,000 marks (\$1,190) and 3,000 marks (\$714), respectively, will be contributed annually for its maintenance. The number of applicants for admission is said to be so large that hardly half can be accommodated. Consul Monaghan speaks of the excellent system of technical education in Germany; nearly every important branch of industry in the Empire, he says, has its school, and the country's industrial development is in large measure due to these educational facilities.

United States Dental Diplomas in the Netherlands.—Under date of April 10, 1899, Minister Newel sends from The Hague copy of a royal order appearing in the Official Gazette of the 8th instant, according to which persons holding the diploma of doctor of dental medicine issued by the dental department of the faculty of dental medicine of Harvard University at Boston, the dental department of the University of Pennsylvania at Philadelphia, the college of dentistry of the University of Michigan at Ann Arbor, or the dental department of the Vanderbilt University at Nashville shall be admitted to the examinations for dentistry in the Netherlands.

Pork Condemned in Sweden.—Consul-General Winslow, of Stockholm, on April 13, 1899, informs the Department that the authorities there have been very active in their inspection of pork. During the month of March, no fewer than 7,040 slaughtered hogs were inspected, together with 19 pieces of American "short clears." Trichinosis was found in 24 carcasses of Swedish pork and in 1 piece of American "short clears." Mr. Winslow adds:

I want our packers to know that there is a good market here for pork products, but they will spoil it if they do not send the article properly prepared.

Constructor of the Siberian Railway.—The Department has received a note from Ambassador Tower, dated St. Petersburg, May 25, 1899, in which he calls attention to the fact that newspapers in the United States have recently published articles describing Mr. Markavitch as the chief constructor of the Siberian Railway. The Russian Minister of Ways of Communication, Prince Hilkoﬀ, has informed Mr. Tower that no one by that name was ever intrusted with the construction of the Siberian line, and Mr. Tower thinks that the error should be corrected, as it may lead to misunderstandings.

Wheat Imports of Spain.—Mr. Mertens, in charge of the consular agency at Valencia, writes, under date of April 27, 1899, that the wheat imports of Spain during the month of March amounted to 19,000 tons (2,205 pounds), divided as follows: From United States, 7,000 tons; from France, 4,000 tons; from Russia, 6,000 tons; from other countries, 2,000 tons. Mr. Mertens also notes an increase in the imports during 1899 of cotton and artificial guano.

Gold in the Transvaal.—Consul Macrum sends from Pretoria, April 18, 1899, copies of the report of the chamber of mines on the production of gold in the Transvaal for the month of March, 1899. The following extracts are from the report:

Yesterday saw one of the largest increases over the previous month ever recorded in the Rand's history. An increase of close upon 40,000 ounces is a marvelous achievement. The Transvaal production of the precious metal, when expressed in ounces, is now getting within measurable distance of 500,000, yesterday's declaration being within 36,000 of that aggregate. The March yield is 23,361 ounces better than the declaration of December, 1898—a month which is invariably good. The Rand output itself was 37,240 ounces in advance of the February figure and 22,074 ounces higher than the record of December. Yesterday's output was well-nigh double the figures of two years ago; it was, indeed, 115,500 ounces

in advance of the showing of March, 1898. We can not compare these results to those of any other gold fields, for they have no analogue. The Rand stands pre-eminent, singular, and will continue so to stand far in advance of all rivals.

Mr. Macrum adds:

The value of these 464,036 ounces of the precious metal was £1,763,336 (\$8,584,666), and the average exports of gold from the ports of South Africa amount now to about £430,000 (\$2,092,595) each week.

Klondike Output for 1899.—Under date of April 29, 1899, Consul Brush, of Clifton, says:

An authority whose estimates have heretofore proved conservative, brings word from Dawson that the wash up from the Yukon this year will aggregate \$19,000,000, apportioned as follows: Eldorado, \$2,500,000; Bonanza, \$2,500,000; French Hill, \$1,500,000; Gold Hill, \$1,500,000; Big Skukum, \$1,000,000; Little Skukum, \$1,000,000; Dominion, \$4,000,000; Hunker and Quartz, \$5,000,000; total, \$19,000,000. These figures leave out of consideration a number of important locations, including Sulphur Creek, Stewart River, Upper Klondike, and Scroggie Creek.

New Gold Mines in Mexico.—Vice-Consul Taylor writes from Ensenada, May 20, 1899, in regard to the discovery of very rich gold placers near the San José and Santa Clara mountains, within 1 league of the Pacific coast. The port is Ascension Bay. There are already, says Mr. Taylor, about 2,000 persons on the ground. The mining camps of Santa Rosalie, San Iawa, and Calmallé are deserted. The placers are 3 leagues wide and 12 or 15 leagues long.

Gold Output of Russia.—Under date of March 24, 1899, Consul Smith, of Moscow, writes that the total output of the gold mines in Russia for the year 1898 amounted to 1,300,000 ounces, or 81,250 pounds.

Stock in Venezuela.—Consul Plumacher, of Maracaibo, under date of March 18, 1899, writes that a decree has been issued by the President, ordering a census of the cattle in the country to be taken. According to the latest returns, the number of cattle, etc., in Venezuela is: Oxen, 2,004,257; sheep, 176,668; goats, 1,667,272; horses, 191,079; mules, 89,186; asses, 312,810; pigs, 1,618,214. The new census will doubtless, says Mr. Plumacher, show much larger figures. A copy of the consul's report has been sent the Department of Agriculture.

Increase in Venezuelan Tariff.—Minister Loomis cables from Caracas, May 19, 1899, that the new tariff law of Venezuela, by which the President is empowered to add 25 per cent additional to all duties, will take effect probably in thirty days.

Duty on Licorice in Venezuela.—Consul Plumacher, of Maracaibo, on April 18, 1899, writes that according to a recent decision from the Venezuelan Government, licorice has been placed in the third class of the import tariff (25 centimes, or 4.8 cents).

Argentine Tariff Changes (Correction).—Minister Buchanan writes from Buenos Ayres, February 22, 1899, in regard to the tax on tobacco for making sheep dip, to which reference was made in his report of February 15.* On inquiry at the Ministry of Hacienda, Mr. Buchanan has been informed that the change made in this year's valuations of the custom-house, by which the class of tobacco in question was taken from the free list and taxed 25 per cent, was an error. The tobacco is to be admitted free, as heretofore.

Port Works at Montevideo.—Minister Finch writes from Montevideo, under date of March 28, 1899, that there appears to be an opening for United States enterprise in the construction of the port at that place. The cost of the work is estimated by Mr. Finch at from \$8,000,000 to \$10,000,000. Representatives of English, German, and French firms are endeavoring to obtain the contract, but bids from the United States are desired. Those wishing to bid should write to Mr. Finch in detail.

Tobacco and Vanilla Crops in Mexico.—Consul Jones, of Tuxpan, under date of March 31, 1899, reports that he wishes to correct statements appearing in United States newspapers, to the effect that the tobacco and vanilla crops along the Mexican coast north of Veracruz have been destroyed by the cold weather. Half of the tobacco plants, says Mr. Jones, were not touched by the frost, and 60 per cent of the vanilla vines will survive. The full text of the report has been sent to the Department of Agriculture.

* See CONSULAR REPORTS No. 225 (June, 1899), p. 345.

Glucose in Belgium.—Consul Roosevelt, of Brussels, under date of April 28, 1899, sends translation of a royal order to the effect that the remission of the excise tax on glucose intended for certain industrial uses, not alimentary,* will no longer be accorded.

Trade of Gold Coast.—Minister Smith, of Monrovia, under date of March 24, 1899, gives the value of imports into the Gold Coast colony from the United States from the 30th of June, 1897, to February, 1899, as £69,172 (\$336,626). During the same period, the exports declared for the United States were valued at £27,405 (\$133,336). The exports consisted of palm oil, mahogany, monkeys, parrots, and leopards. Twelve American vessels, with a total tonnage of 5,433 tons, arrived and cleared during the seven months under consideration.

Consular Reports Transmitted to Other Departments.—The following reports from consular officers (originals or copies) have been transmitted since the date of the last report to other Departments for publication or for other action thereon:

Consular officer reporting.	Date.	Subject.	Department to which referred.
E. Schneegans, Saigon.....	Mar. 28, 1899	Rice market.....	Department of Agriculture.
Do	Apr. 11, 1899	do	Do.
Do	Apr. 25, 1899	do	Do.
M. H. Twitchell, Kingston, Canada.	May 31, 1899	Agricultural conditions.....	Do.

* See CONSULAR REPORTS No. 224 (May, 1899), p. 201.

FOREIGN REPORTS AND PUBLICATIONS.

Commerce of Senegal.—From the *Recueil Consulaire*, Vol. XCIX, Brussels, 1898, the following is taken:

The value of imports into Senegal during the year 1897 is estimated at 25,000,000 francs (\$4,825,000). Of these, Rufisque and its dependencies received 12,000,000 francs (\$2,316,000); Saint Louis, 10,000,000 francs (\$1,930,000); Dakar and Gorée, 3,000,000 francs (\$579,000). The chief imports are wine, spirits, biscuit, flour, textiles, and hardware. During the same year, the exports reached a total of 15,000 tons, valued at 12,000,000 francs (\$2,316,000).

The principal articles of export are arachides (groundnuts) and rubber. The harvest of groundnuts in 1897 amounted to 73,866 tons. The price varied during the year from 17.50 francs to 19 francs (\$3.38 to \$3.67) per 100 kilograms (220.46 pounds).

In 1897, a new variety of india rubber was exported from Rufisque—the product of a tree of the fig family. The juice of this tree coagulates naturally on contact with the air. This rubber is less elastic than that produced by the rubber tree proper, but it has the same general properties. The exports of this rubber amounted to 32,000 kilograms (70,547 pounds), valued at 100,000 francs (\$19,300).

Bentamaré is the product of a native tree which grows in great quantities in several parts of Senegal. So far, the grains have been used only to mix with coffee and chocolate. In 1897, 50,000 kilograms (110,230 pounds) were sent to Marseilles and Hamburg. It can never be used to any great extent, as the grain has been found to contain principles injurious to health.

In December, 1897, the general assembly of the colony voted 20,000 francs (\$3,860) for the creation of an agricultural mission. The following credits were voted for Rufisque: Seventy-five thousand francs (\$14,475) for the construction of a second wharf; 60,000 francs (\$11,580) for canalization; 25,000 francs (\$4,825) for a powder magazine; also 50,000 francs (\$9,650) for the water main at Saint Louis.

The work of improving the port of Dakar is under discussion. Besides 60,000 francs (\$11,580) voted for waterworks, and 5,000 francs (\$965) for the purchase of a crane for the port, plans are being made for the construction of wharves, a repair dock, etc. There is talk of a railway from Thiès to Fatick; two companies are considering the establishment of coal depots, and Dakar seems destined to become one of the most important ports of the western coast of Africa.

Railways in Tonkin.—The *Revue du Commerce Extérieur*, Paris, May 6, 1899, has the following note relative to the projected railways in Tonkin:

The governor-general of Indo China has proposed to the Minister of the Colonies to commence work on the railways whose construction was authorized by the law of December 25, 1898. The line from Hanof to Vinh will be 319 kilometers

(198 miles) long; that from Haiphong to Viétri 154 kilometers (96 miles). It is estimated that the total cost of the two lines will be 46,601,400 francs (\$8,994,070), an average of 98,523 francs (\$19,016) per kilometer, some \$300 less than the estimate made to determine the loan.

Viétri is situated just at the confluence of the Red River and the River Claire, and 12 kilometers northeast of the junction of the Red and Black rivers. The second line from Hanoi Ninh-Binh will cross the delta of the Red River. But from Ninh-Binh to Giem-Quinh it will cross two massive mountains, separated by the delta of the Song-Ma. The first sum of 150,000,000 francs (\$28,950,000) has been raised. The credit necessary to assure the annual payment is inscribed on the general budget of Indo China. For 1899, it amounts to 1,600,000 francs (\$308,800).

Railways in Ceylon.—The *Recueil Consulaire*, Vol. XCIX, Brussels, 1898, says:

The total length of railways in operation throughout the island of Ceylon in 1897 was 1,958 kilometers (1,217 miles). They traverse a most uneven country, the altitude varying from zero at Colombo to 6,300 feet near Nanwoya. The first railway constructed on the island was from Colombo to Kandy, a distance of 74 miles; the average grade was 1 to 45, and the cost about £1,700,000 (\$8,273,050). This road was afterwards prolonged 17 miles to Nawalapitiya, and later a branch road was built from Kandy to Metale, 17½ miles. South of Colombo, the line was extended to Kaloutara, 27½ miles. In 1885, a railway was built from Nawalapitiya to Nanwoya, 41½ miles farther in the interior and situated at an altitude of 5,600 feet. In 1894, the line from Nanwoya was extended to Bandiarawela, 29 miles. The coast line has been extended from Kaboutawa to Matara, 100 miles from Colombo. All these lines are broad gauge, but the present government seems disposed to favor the construction of narrow-gauge roads, which will join the principal lines and open up the chief agricultural centers of the island.

Trade Conditions in Paraguay.—The following extracts are from a report in the *Moniteur Officiel du Commerce*, Paris, January 12, 1899:

On account of her geographical situation, Paraguay has no direct commercial relations with Europe. Brazil, the Argentine, and Oriental republics are the markets from which she draws the greater part of her supplies.

Certain firms which import from Europe do it through the medium of commission merchants and on six months' credit for France and Germany, eight and nine months for England, three months for Spain and Italy. Purchases direct from manufactories are made payable at thirty days.

The chief imports are textiles of every kind, wines, flour, wheat, butter, potatoes, coffee, perfumery, hardware, and iron. All articles of foreign production, in addition to the regular duty, pay a duty of one-half of 1 per cent, called "droit d'eslingaje," if they remain stored in the warehouse more than four days. The first article of the general tariff law of December, 1892, establishes a single duty of 25 per cent upon all merchandise introduced into Paraguay, except certain articles, such as

fresh fish, native fruits, cement, gold and silver, books, scientific instruments, needles, locomotives, thoroughbred animals, sewing machines, lime, rails, cross-beams or cylinders of wood, and pipes of zinc, which may be imported free of duty.

On linen and cotton cloths, percales, hats, and firearms, there is a duty of 20 per cent. Ready-made clothing and wearing apparel in general, shoes, ornaments, and harness pay a duty of 40 per cent; marbles, 10 per cent; flour, 8 per cent; wines in barrels or casks, beer, and articles of silk, a duty of 30 per cent; jewelry of gold and silver, as well as instruments or utensils mounted on gold or silver, pay a duty of 5 per cent and precious stones 2 per cent.

Communications in Peru.—The *Recueil Consulaire*, Vol. XCVI, Brussels, 1897, has a report on Peru, from which the following is taken:

Two submarine cables follow the coast of Peru—the Central and South American Telegraph Company, from Panama to Chile, with stations at Paita and Callao, and the West Coast of America Telegraph Company, which starts from Callao, touches at Mollendo and Arica, and continues its route to Chile. The telegraphic lines of the Peruvian Government have a total length of some 3,000 kilometers (about 2,000 miles). The city of Lima is served by the Peruvian Telephone Company, which connects it with the neighboring towns of Callao, Chorrillos, Barranco, and Miraflores. The subscription is from 5 to 7½ soles (\$2.25 to \$3.37) per month.

The railways of Peru are divided into two classes—those which belong to the Government and those which are the property of individual enterprise.

The first comprises:

First. The Central Railway, from Callao to Oroya, 220 kilometers (137 miles). The most elevated point is the tunnel from Paso to Galera, at the height of 4,775 meters (15,014 feet). From Lima, there is a branch line for Ancon, 38 kilometers (24 miles).

Second. The line from Pacasmayo to Guadalupe and Jonau, 92 kilometers (57 miles).

Third. Line from Paita to Piura, 97 kilometers (60 miles).

Fourth. The narrow-gauge line from Salaverry to Trujillo and Ascope, 47 miles.

Fifth. The narrow-gauge from Chimbote to Suchiman, 32 miles.

Sixth. The line from Pisco to Ica, 44 miles.

Seventh. The line from Mollendo to Arequipa, Juliaca, and Puno (318 miles). By this route, a large transit commerce is carried on with Bolivia via Lake Titicaca. At Juliaca, there is a branch road to Sicuani.

The railways belonging to private corporations are:

First. The line from Lima to Callao (8.6 miles), inaugurated in 1850, belonging to an English company.

Second. The line from Lima to Chorrillos, belonging to the same company.

Third. The line from Lima to Magdalena, a narrow-gauge road 3.7 miles long, belonging to a French company.

Fourth. The line from Lambayeque to Pimental, opened to traffic in 1867, narrow gauge, 15 miles long.

Fifth. The line from Eten to Ferrenafe and Patapo, 48 miles, narrow gauge.

Sixth. The line from Pura to Catacaos, 9.3 miles. Catacaos is the center of the manufacture of the so-called Panama straw hats.

These lines form altogether a network of 1,356 kilometers (843 miles) administered by the Peruvian Government, and 214 kilometers (133 miles) managed by private corporations. Peruvian commerce complains of the high tariff of the different lines.

The superb roads of the Incas have long since disappeared, and away from the railways and the vicinity of the large towns, everything is transported on the backs of mules, llamas, or Indians.

Notes from Peru.—From the Geographical and Statistical Synopsis of Peru, Lima, 1898, the following extracts are taken:

Foreigners are received and treated with the greatest cordiality in Peru; they enjoy the same liberty for traveling as the natives, and have also the right to invoke the protection of the habeas corpus act. With the sole condition of submission to the laws of the country, they can enter upon any business or trade they please, so long as they do not offend public morality, health, or security. They can dispose with perfect freedom of their personal or landed property, denounce mines, purchase lands in the interior, etc.

The following statistics show the increase of commerce in 1897 over that of 1896:

Description.	1896.		1897.	
	<i>Soles.*</i>		<i>Soles.*</i>	
Imports.....	17,505,148	\$8,612,533	18,004,048	\$8,083,818
Exports.....	21,862,334	10,756,268	31,025,382	13,930,397

* The value of the Peruvian sol in 1896 was 49.2 cents and in 1897 44.9 cents, according to the estimates of the United States Director of the Mint.

Much has recently been done for the improvement of roads and bridges. Callao is to be drained and to have a new system of waterworks. Waterworks have been made in Paita, Colan, and Trujillo. Electric-light plants are already established in Arequipa and Cerro de Pasco. Barranco is well lighted by gas. Lima has excellent systems of waterworks and sewerage. The sharp descent of the Rimac is utilized. Brick filtering galleries are built under the bottom of the river, conducting the water in iron pipes by gravity to the distributing system, giving a constant stream of fresh water through its whole extent.

New Franco-Italian Commercial Treaty.—The Board of Trade Journal, London, April, 1899, gives the following statement of the rates of duty on articles of French origin imported into Italy, according to the new commercial agreement concluded between that country and France. The rates previously in force are also given. The concessions made for the articles named extend to the United States, as well as to other countries entitled to the most-favored-nation treatment in Italy.

Articles.	Old rate.		New rate.	
	<i>Live.</i>		<i>Live.</i>	
Wine in bottles.....per 100...	60.00	\$11.58	20.00	\$3.86
Brandy:				
In casks and kegs.....per hectoliter...	90.00	17.37	60.00	11.58
In bottles of more than half but not exceeding 1 liter, per 100.....	90.00	17.37	60.00	11.58
In bottles containing half a liter or less.....per 100...	67.50	13.03	45.00	8.69
Essence of roses.....per kilogram*	40.00	7.72	20.00	3.86
Sweetmeats and preserves, with sugar or honey, per 100 kilograms.....	125.00	24.13	100.00	19.30
Mustard, liquid, in powder, or prepared..per 100 kilograms...	11.00	2.12	8.00	1.54
Spices, not specified.....do.....	27.50	5.31	25.00	4.83
Cartridges:				
Empty, with caps.....do.....	160.00	30.88	75.00	14.48
Loaded do.....	270.00	52.11	200.00	38.60
Medicinal preparations, not separately specified in the tariff:				
Lozenges, pills, globules, and capsules, per 100 kilo- grams.....	120.00	23.16	100.00	19.30
Wines, sirups, and elixirs.....per 100 kilograms...			40.00	7.72
Other kinds.....do.....			60.00	11.58
Medicines of the French Pharmacopœia and approved by the French Academy of Medicine are admitted on the same terms as those of the Italian Pharmacopœia.				
Soap:				
Common.....per 100 kilograms...	8.00	1.54	7.00	1.35
Perfumed do.....	40.00	7.72	35.00	6.76
Perfumery, nonalcoholic (including the weight of imme- diate receptacles).....per 100 kilograms...	100.00	19.30	50.00	9.65
The surtax of manufacture on alcohols in alcoholic per- fumes will be calculated after deduction of the weight of the immediate receptacles, whenever the importer applies that method of calculation; in the other cases, it will be calculated on the basis of a legal tare fixed by the Minis- ter of Finance.				
Pencils, without sheaths, excluding crayons, per 100 kilo- grams.....	100.00	19.30	10.00	1.93
Shoemakers' thread of linen or hemp..per 100 kilograms...	110.00	21.23	80.00	15.44
Tissues of jute, velvety.....do.....	150.00	28.95	100.00	19.30
Galloons and braids of linen and hemp.....do.....	130.00	25.09	110.00	21.23
Buttons of linen, hemp, or other vegetable fiber, except cotton per 100 kilograms...	130.00	25.09	110.00	21.23
Collars, cuffs, and shirts for men, of linen, hemp, or cotton, per 100 kilograms.....	(†)		(†)	
Coverlets of cotton tissue, bleached or dyed, per 100 kilo- grams.....	(§)		100.00	19.30
Foot rugs, unsewn, are treated as coverlets, per 100 kilo- grams.....	(§)		100.00	19.30
Cotton velvets:				
(a) Common and plush—				
Unbleached.....per 100 kilograms...	120.00	23.16	114.00	22.00
Bleached.....do.....	140.00	27.02	130.00	25.09
Dyed.....do.....	165.00	31.85	155.00	29.92
Printed.....do.....	220.00	42.46	205.00	39.57

* 1 kilogram = 2.2046 pounds.

† Twice the duty on the tissue.

‡ Duty on the tissue, plus 50 per cent.

§ As the tissue of which made, according to class.

Articles.	Old rate.		New rate.	
	<i>Lire.</i>		<i>Lire.</i>	
Cotton velvets—Continued.				
(b) Fine—				
Unbleached.....per 100 kilograms...	140.00	\$27.02	132.00	\$25.48
Bleached.....do.....	170.00	36.81	160.00	30.88
Dyed.....do.....	200.00	38.60	190.00	36.67
Printed.....do.....	250.00	48.25	235.00	45.36
Cotton lace, unbleached.....per kilogram...	7.00	1.35	5.00	.97
Galloons and tapes, of cotton.....	120.00	23.16	100.00	19.30
Trimmings, of cotton:				
Cotton wicks for lamps and plaited wicks for candles, per 100 kilograms.....	100.00	19.30	80.00	15.44
Tassels, fringes, and trimmings for furniture, per 100 kilograms.....	150.00	28.95	100.00	19.30
Buttons, of cotton.....	150.00	28.95	120.00	23.16
Tissues of wool:				
(a) Rasati (short napped), not fulled, of wool, pure or mixed with silk or waste silk in a proportion of less than 12 per cent, weighing per square meter— 200 grams or less.....per 100 kilograms...	250.00	48.25	220.00	42.46
More than 200 grams, but not more than 500 grams.....per 100 kilograms...	220.00	42.46	200.00	38.60
(b) Stuffs for furniture weighing more than 500 grams per square meter.....per 100 kilograms...	190.00	36.67	100.00	19.30
Coverlets of wool, pure or mixed.....do.....	(*)		100.00	19.30
Tulles.....per kilogram.....	7.00	1.35	5.00	.97
Galloons of wool, for clothing.....per 100 kilograms...	240.00	46.32	220.00	42.46
Buttons of wool.....	240.00	46.32	220.00	42.46
Made-up articles of wool or hair, except stays and corsets for women.....	(†)		(‡)	
Stays and corsets for women, of linen, hemp, cotton or wool:				
Trimmed or embroidered.....each.....	(§)		.60	.12
Other kinds.....	(§)		.30	.06
Stays, simply bound with linen, hemp, or cotton tapes are not considered as trimmed. Stays feather stitched even with silk, for the purpose of fixing the steels, are not con- sidered as being embroidered. Camisoles, stays, and other similar articles of clothing, made of hosiery piece goods (of wool) are not treated as woollen stays.				
Trimmings, of which the outer part is formed of silk or silk waste and wool, cotton, linen, or hemp, or other vegeta- ble fibers, with the silk or silk waste, in a proportion of less than 12 per cent.....per 100 kilograms...	(||)		300.00	57.90
Furniture, or parts of furniture, in the rough or finished, of cabinetmakers' wood, veneered, carved, or inlaid, up- holstered or not.....per 100 kilograms...	60.00	11.58	50.00	9.65
Frames, or slips of wood for frames:				
(a) Plain or carved, but not varnished, gilt, nor silvered, per 100 kilograms.....	35.00	6.76	30.00	5.79
(b) Other, varnished, gilt, or silvered.....	70.00	13.51	60.00	11.58
Penholders of wood, including those with metal tips, per 100 kilograms.....	50.00	9.65	40.00	7.72
Common street carts of wood in the rough, unfinished.....			(¶)	
Paper for ornaments.....per 100 kilograms...	40.00	7.72	30.00	5.79
Blotting paper.....per 100 kilograms...	15.00	2.90	12.50	2.41
Playing cards.....	40.00	7.72	30.00	5.76

*As the tissue of which made.

†Duty on the tissue with an addition of 40 per cent.

‡Duty on the tissue with an addition of 35 per cent.

§Charged as made-up articles of the respective tissues.

||Charged as trimmings, according to material.

¶Half the duty on the finished carts.

Articles.	Old rate.		New rate.	
	<i>Lira.</i>		<i>Lira.</i>	
Maps:				
On paper or cardboard, in sheets or in atlases, simply bound.....	80.00	\$15.44	Free.	.....
On linen-backed paper, with or without rods, or bound in atlases.....per 100 kilograms...	80.00	15.44	30.00	\$5.76
Manufactures of paper and pasteboard not separately specified in the tariff:				
Manufactures of cardboard or stamped celluloid, compressed or hardened, with or without patterns, per 100 kilograms.....	80.00	15.44	40.00	7.72
Other kinds.....	80.00	15.44	70.00	13.51
Books, printed in French, with cardboard covers, even if covered with textile material or paper, and with the title stamped on the outside.....per 100 kilograms...	20.00	3.86	12.00	2.32
Hides, cut for uppers, etc.....	(*)	.....	(†)	.....
Muffs, of skins, with the hair on.....	600.00	115.80	450.00	86.85
Saddles.....	1,500.00	289.50	1,200.00	131.60
Leather portmanteaus, except those fitted with toilet articles and other traveling requisites.....per 100 kilograms...	120.00	23.16	‡2.80	.54
Manufactures of skins, tanned, without the hair, not separately specified in the tariff.....per 100 kilograms...	120.00	23.16	100.00	19.30
Utensils and instruments for arts and trades, of cast or wrought iron or steel, common polished, varnished, or galvanized, or coated with lead, tin, brass, or ornamented with any other metal.....per 100 kilograms...	15.50	2.99	14.50	2.80
Manufactures of nickel:				
Gilt or silvered.....do.....	120.00	23.16	100.00	19.30
Other kinds.....do.....	100.00	19.30	80.00	15.44
Gold, beaten in leaves (without deducting the weight of the paper).....per kilogram...	18.00	3.47	16.00	3.09
Cement and hydraulic lime.....per 100 kilograms...	1.25	.20	.50	.096
Tiles, of terra cotta.....do.....	3.00	.58	2.00	.38
Oranges and lemons (also in brine).....do.....	4.00	.77	2.00	.38
Dates.....do.....	12.00	2.32	2.00	.38
Beans, pease, mushrooms, and asparagus in oil, salt, or vinegar.....	20.00	3.86	12.00	2.32
Sardines and anchovies, marinated or in oil, in boxes or not.....per 100 kilograms...	30.00	5.79	15.00	2.90
Glue.....	4.00	.77	2.00	.38
Fish glue.....	15.00	2.90	10.00	1.93
Ornamental feathers (dressed).....per kilogram...	35.00	6.76	25.00	4.83
Wares of ivory, mother-of-pearl, and tortoise shell, excluding combs.....per 100 kilogram...	150.00	28.95	100.00	19.30
Wares of horn, bone, and similar substances, except combs, per 100 kilograms.....	80.00	15.44	60.00	11.58
Amber and its manufactures.....per 100 kilograms...	150.00	28.95	100.00	19.30
Small wares (excluding toys):				
Common.....do.....	100.00	19.30	80.00	15.44
Fine.....do.....	200.00	38.60	150.00	28.95
Fans:				
Common.....do.....	100.00	19.30	90.00	17.37
Fine.....do.....	200.00	38.60	150.00	28.95
Hats of any kind, trimmed, for women.....per 100...	500.00	96.50	400.00	77.20
Shapes for articles of fashion.....per kilogram...	1.00	.193	.50	.096
Umbrellas:				
Of silk.....per 100.....	140.00	27.02	125.00	24.13
Of other stuff.....do.....	80.00	15.44	60.00	11.58

* Duty on the skin, with an addition of 20 per cent.

† Duty on the skin, with an addition of 15 per cent.

‡ Each.

The concessions granted by France to Italy are stated in the following decree, appearing in the Journal Officiel of February 13:

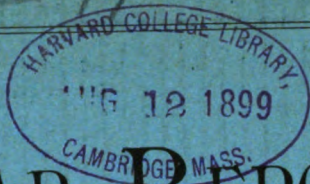
The minimum tariff, resulting from the law of January 11, 1892, and subsequent laws, will be applied, beginning with February 12, 1899, on goods of Italian origin, with the exception of silks and articles of silk (Nos. 27, 379, 380, 381, and 459 of the tariff).

The French and Italian custom-houses have received telegraphic instructions to apply the minimum tariff from that date.

Vol. LX.

VI. 990

No. 227.



CONSULAR REPORTS.

AUGUST, 1899.

COMMERCE, MANUFACTURES, ETC.

[FOR TABLE OF CONTENTS, SEE FIRST PAGE.]



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1899.

PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.*

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs in Central America, etc., are exhausted and the Department is, therefore, unable to supply copies.

In 1890, the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Files in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries.

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries.

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour.

Vol. 11 (1894).—American Lumber in Foreign Markets.

Vol. 12 (1895).—Highways of Commerce.

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

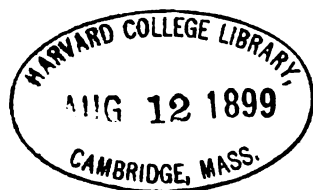
Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Files in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Highways of Commerce, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., and Tariffs of Foreign Countries are exhausted, and no copies can be supplied by the Department.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

* Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.



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Full directions for binding the Consular Reports are given in No. 131, page 663.

VALUES OF FOREIGN COINS AND CURRENCIES.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston makes the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to \$20.67 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to April 1, 1899, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account

that the ruble of Russia, for instance, fluctuated from 77.17 cents in 1874 to 37.4 cents in April, 1897, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891-95 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

Countries.	Standard.	Monetary unit.	Value in U.S. gold.	Coins.
Argentine Republic*	Gold and silver.	Peso.....	\$0.96,5	Gold—Argentine (\$4.82,4) and $\frac{1}{2}$ Argentine; silver—peso and divisions.
Austria-Hungary†....	Gold	Crown.....	.20,3	Gold—20 crowns (\$4.05,2) and 10 crowns.
Belgium	Gold and silver..	Franc.....	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil.....	Gold	Milreis.....	.54,6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{2}$, 1, and 2 milreis.
British North America (except Newfoundland).	do	Dollar.....	1.00	
British Honduras.....	do	do	1.00	
Chile.....	do	Peso.....	.36,5	Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Costa Rica.....	do	Colon.....	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.
Cuba	Gold and silver.	do	.92,6	Gold—doubloon (\$5.01,7); silver—peso (60 cents).
Denmark	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Egypt.....	do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland.....	do	Mark.....	.19,3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark.....	.23,8	Gold—5, 10, and 20 marks.
Great Britain.....	do	Pound sterling...	4.86,6 $\frac{1}{2}$	Gold—sovereign (pound sterling) and half sovereign.
Greece.....	Gold and silver..	Drachma.....	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	do	Gourde.....	.96,5	Silver—gourde.
Italy.....	do	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire silver—5 lire.
Japan‡.....	Gold.....	Yen.....	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	do	Dollar.....	1.00	
Netherlands§.....	Gold and silver..	Florin.....	.40,2	Gold—10 florins; silver— $\frac{1}{2}$, 1, and 2 $\frac{1}{2}$ florins.
Newfoundland	Gold	Dollar.....	1.01,4	Gold—\$2 (\$2.02,7).
Portugal.....	do	Milreis.....	1.08	Gold—1, 2, 5, and 10 milreis.
Russia |.....	.....do	Ruble.....	.51,5	Gold—imperial (\$7.718) and $\frac{1}{2}$ imperial (\$3.80); silver— $\frac{1}{4}$, $\frac{1}{2}$, and 1 ruble.
Spain.....	Gold and silver..	Peseta.....	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway.	Gold	Crown.....	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver..	Franc.....	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster.....	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Gold	Peso.....	1.03,4	Gold—peso: silver—peso and divisions.
Venezuela.....	Gold and silver..	Bolivar.....	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875, the gold standard prevailed.

† The gold standard was adopted October 1, 1892. (See CONSULAR REPORTS No. 147, p. 623.) Values are still, however, frequently expressed in the florin or guilder, which is worth 2 crowns or 40.6 cents.

‡ Gold standard adopted October 1, 1897. (See CONSULAR REPORTS No. 201, p. 259.)

§ See note to table of fluctuating currencies.

[For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.]

B.—Countries with fluctuating currencies, 1874-1890.

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1878.	1880.	1883.	1884.
Austria-Hungary*	Silver.....	Florin.....	\$0.47,6	\$0.45,3	\$0.45,3	\$0.41,3	\$0.40,1	\$0.39,8
Bolivia.....	do.....	Dollar until 1890; bolivi- ano there- after.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America.....	do.....	Peso.....	.96,5	.91,8	.91,8	.83,6		
China.....	Silver.....	Haikwan tael..	1.61	1.61				
Colombia.....	do.....	Peso.....	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador.....	do.....	do.....	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†.....	Gold.....	Pound (100 piasters).			4.97,4	4.97,4	4.90	4.90
India.....	Silver.....	Rupee.....	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan.....	Gold.....	Yen.....	.99,7	.99,7	.99,7	.99,7		
	Silver.....						.87,6	.86,9
Mexico.....	do.....	Dollar.....	1.04,7	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡.....	Gold and Silver.	Florin.....	.40,5	.38,5	.38,5	.40,2		
Peru.....	Silver.....	Sol.....	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia.....	do.....	Ruble.....	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli.....	do.....	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*	Silver.....	Florin.....	\$0.39,3	\$0.37,1	\$0.35,9	\$0.34,5	\$0.33,6	\$0.42
Bolivia.....	do.....	Dollar until 1880; bolivi- ano there- after.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America.....	do.....	Peso.....				.69,9	.68	.85
Colombia.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador.....	do.....	do.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†.....	Gold.....	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.94,3
India.....	Silver.....	Rupee.....	.37,8	.35,7	.34,6	.32,2	.32,3	.40,4
Japan.....	Gold.....	Yen.....			.99,7	.99,7	.99,7	
	Silver.....		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico.....	do.....	Dollar.....	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru.....	Silver.....	Sol.....	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia.....	do.....	Ruble.....	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli.....	do.....	Mahbub of 20 piasters.	.71,7	.67,7	.65,6	.63	.61,4	.76,7

* The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (see CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

† The Egyptian pound became fixed in value at \$4.94,3 in 1887.

‡ The Netherlands florin fluctuated up to the year 1880, when it became fixed at 4c.2 cents.

C.—Quarterly valuations of fluctuating currencies.

Countries.	Monetary unit.	1896.				1897.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Bolivia.....	Silver boliviano.....	\$0.49,1	\$0.49,3	\$0.49,7	\$0.49	\$0.47,4	\$0.46,8	\$0.44,3	\$0.41,2
Central America.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,5	.44,3	.41,2
China.....	Amoy tael.....				.79,3	.76,7	.75,7	.71,7	.66,4
	Canton tael.....				.79	.76,5	.75,5	.71,5	.66,4
	Chefoo tael.....	.75,9	.76,3	.76,9	.75,8	.73,3	.72,4	.68,6	.63,7
	Chinkiang tael.....				.77,4	.74,9	.73,9	.70	.65,1
	Fuchau tael.....				.73,3	.70,9	.70	.66,3	.61,6
	Haikwan tael.....	.80,8	.81,2	.81,9	.80,6	.78	.77	.73,1	.67,8
	Hankau tael.....				.74,2	.71,7	.70,8	.67,1	.62,3
	Ningpo tael.....				.76,2	.73,7	.72,8	.68,9	.64
	Niuchwang tael.....				.74,3	.71,9	.71	.67,2	.62,5
	Shanghai tael.....	.72,5	.72,9	.73,5	.72,4	.70	.69,1	.65,5	.60,8
	Swatow tael.....				.73,2	.70,8	.69,9	.66,2	.61,5
	Takao tael.....				.79,8	.77,2	.76,2	.72,2	.67
	Tientsin tael.....	.76,9	.77,3	.78	.76,8	.74,3	.73,4	.69,5	.64,6
Colombia.....	Silver peso.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Ecuador.....	do.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
India.....	Silver rupee.....	.23,3	.23,4	.23,6	.23,3	.22,5	.22,2	.21,1	.19,6
Japan.....	Silver yen.....	.52,9	.53,2	.53,2	.52,8	.51,1	.50,5		
Mexico.....	Silver dollar.....	.53,3	.53,6	.54	.53,2	.51,5	.50,8	.48,2	.44,6
Persia.....	Silver kran.....	.09	.09,1	.09,2	.09	.08,7	.08,6	.08,2	.07,6
Peru.....	Silver sol.....	.49,1	.49,3	.49,7	.49	.47,4	.46,8	.44,3	.41,2
Russia.....	Silver ruble.....	.39,3	.39,5	.39,8	.39,2	.37,9	.37,4		
Tripoli.....	Silver mahbub.....	.44,3	.44,5	.44,9	.44,2				

Countries.	Monetary unit.	1898.				1899.		
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.
Bolivia.....	Silver boliviano.....	\$0.42,4	\$0.40,9	\$0.41,8	\$0.43,6	\$0.43,9	\$0.43,4	\$0.44,3
Central America.....	Silver peso.....	.41,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3
China.....	Amoy tael.....	.68,5	.66,2	.67,6	.70,6	.71	.70,2	.71,6
	Canton tael.....	.68,3	.66	.67,4	.70,4	.70,8	.70	.71,4
	Chefoo tael.....	.65,5	.63,3	.64,6	.67,5	.67,9	.67,2	.68,4
	Chinkiang tael.....	.66,9	.64,6	.65	.69	.69,3	.68,6	.69,9
	Fuchau tael.....	.63,4	.61,2	.62,5	.65,3	.65,6	.65	.66,2
	Haikwan tael.....	.69,7	.67,3	.68,8	.71,8	.72,2	.71,4	.72,8
	Hankau tael.....	.64,1	.61,9	.63,2	.66	.66,4	.65,7	.67
	Ningpo tael.....	.64,3	.63	.65	.67,9	.68,2	.67,5	.68,8
	Niuchwang tael.....	.65,9	.62	.63,4	.66,2	.66,5	.65,9	.67,1
	Shanghai tael.....	.62,6	.60,4	.61,7	.64,5	.64,8	.64,1	.65,4
	Swatow tael.....	.63,3	.61,1	.62,4	.65,2	.65,5	.64,9	.66,1
	Takao tael.....	.66	.66,6	.68	.71	.71,4	.70,7	.72
	Tientsin tael.....	.66,4	.64,1	.65,5	.68,4	.68,8	.68	.69,4
Colombia.....	Silver peso.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3
Ecuador.....	do.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3
India *	Silver rupee.....	.20,1	.19,1	.19,9	.20,7	.20,8	.20,6	.21
Japan.....	Silver yen.....							.49,8
Mexico.....	Silver dollar.....	.46	.44,4	.45,4	.47,4	.47,7	.47,2	.48,1
Persia.....	Silver kran.....	.07,8	.07,5	.07,7	.08	.08,1	.08	.08,2
Peru.....	Silver sol.....	.42,4	.40,9	.41,8	.43,6	.43,9	.43,4	.44,3

* The commercial value of the rupee to be determined by consular certificate.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalents.
Almude	Portugal.....	4.422 gallons.
Ardeb.....	Egypt	7.6907 bushels.
Are.....	Metric.....	0.02471 acre.
Arobe	Paraguay.....	25 pounds.
Arratel or libra.....	Portugal.....	1.011 pounds.
Arroba (dry).....	Argentine Republic.....	25.3175 pounds.
Do.....	Brazil.....	32.38 pounds.
Do.....	Cuba	25.3664 pounds.
Do.....	Portugal.....	32.38 pounds.
Do.....	Spain.....	25.36 pounds.
Do.....	Venezuela.....	25.4024 pounds.
Arroba (liquid).....	Cuba, Spain, and Venezuela.....	4.263 gallons.
Arshine	Russia.....	28 inches.
Arshine (square).....	do.....	5.44 square feet.
Artel.....	Morocco.....	1.12 pounds.
Baril.....	Argentine Republic and Mexico.....	20.0787 gallons.
Barrel.....	Malta (customs).....	11.4 gallons.
Do.....	Spain (raisins).....	100 pounds.
Berkovets.....	Russia.....	361.12 pounds.
Bongkal.....	India.....	832 grains.
Bouw.....	Sumatra.....	7,096.5 square meters.
Bu.....	Japan.....	0.1 inch.
Butt (wine).....	Spain.....	140 gallons.
Caffiso.....	Malta.....	5.4 gallons.
Candy.....	India (Bombay).....	529 pounds.
Do.....	India (Madras).....	500 pounds.
Cantar.....	Morocco.....	113 pounds.
Do.....	Syria (Damascus).....	575 pounds.
Do.....	Turkey.....	124.7036 pounds.
Cantaro (cantar).....	Malta.....	175 pounds.
Carga.....	Mexico and Salvador.....	300 pounds.
Catty.....	China.....	1.333½ (1½) pounds.
Do*.....	Japan.....	1.31 pounds.
Do.....	Java, Siam, and Malacca.....	1.35 pounds.
Do.....	Sumatra.....	2.12 pounds.
Centaro.....	Central America.....	4.2631 gallons.
Centner.....	Bremen and Brunswick.....	117.5 pounds.
Do.....	Darmstadt.....	110.24 pounds.
Do.....	Denmark and Norway.....	110.11 pounds.
Do.....	Nuremberg.....	112.43 pounds.
Do.....	Prussia.....	113.44 pounds.
Do.....	Sweden.....	93.7 pounds.
Do.....	Vienna.....	123.5 pounds.
Do.....	Zollverein.....	110.24 pounds.
Do.....	Double or metric.....	220.46 pounds.
Chih.....	China.....	14 inches.

* More frequently called "kin." Among merchants in the treaty ports it equals 1.33½ pounds avoirdupois.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Coyan.....	Sarawak.....	3,098 pounds.
Do.....	Siam (Koyan).....	2,667 pounds.
Cuadra.....	Argentine Republic.....	4.2 acres.
Do.....	Paraguay.....	78.9 yards.
Do.....	Paraguay (square).....	8.077 square feet.
Do.....	Uruguay.....	Nearly 2 acres.
Cubic meter.....	Metric.....	35.3 cubic feet.
Cwt. (hundredweight).....	British.....	112 pounds.
Dessiatine.....	Russia.....	2.6997 acres.
Do.....	Spain.....	1.599 bushels.
Drachme.....	Greece.....	Half ounce.
Egyptian weights and measures.....	(See CONSULAR REPORTS No. 144.)	
Fanega (dry).....	Central America.....	1.5745 bushels.
Do.....	Chile.....	2.575 bushels.
Do.....	Cuba.....	1.599 bushels.
Do.....	Mexico.....	1.54728 bushels.
Do.....	Morocco.....	Strike fanega, 70 lbs.; full fanega, 118 lbs.
Do.....	Uruguay (double).....	7.776 bushels.
Do.....	Uruguay (single).....	3.888 bushels.
Do.....	Venezuela.....	1.599 bushels.
Fanega (liquid).....	Spain.....	16 gallons.
Feddán.....	Egypt.....	1.03 acres.
Frail (raisins).....	Spain.....	50 pounds.
Frasco.....	Argentine Republic.....	2.5096 quarts.
Do.....	Mexico.....	2.5 quarts.
Fuder.....	Luxemburg.....	264.17 gallons.
Garnice.....	Russian Poland.....	0.88 gallon.
Gram.....	Metric.....	15.432 grains.
Hectare.....	do.....	2.471 acres.
Hectoliter:		
Dry.....	do.....	2.838 bushels.
Liquid.....	do.....	26.417 gallons.
Joch.....	Austria-Hungary.....	1.422 acres.
Ken.....	Japan.....	6 feet.
Kilogram (kilo).....	Metric.....	2.2046 pounds.
Kilometer.....	do.....	0.621376 mile.
Klafter.....	Russia.....	216 cubic feet.
Koku.....	Japan.....	4.9629 bushels.
Korree.....	Russia.....	3.5 bushels.
Kwan.....	Japan.....	8.28 pounds.
Last.....	Belgium and Holland.....	85.134 bushels.
Do.....	England (dry malt).....	82.52 bushels.
Do.....	Germany.....	2 metric tons (4,480 pounds).
Do.....	Prussia.....	112.29 bushels.
Do.....	Russian Poland.....	11½ bushels.
Do.....	Spain (salt).....	4,760 pounds.
League (land).....	Paraguay.....	4,633 acres.
Li.....	China.....	2,115 feet.
Libra (pound).....	Castilian.....	7,100 grains (troy).
Do.....	Argentine Republic.....	1.0127 pounds.
Do.....	Central America.....	1.043 pounds.
Do.....	Chile.....	1.014 pounds.
Do.....	Cuba.....	1.0161 pounds.
Do.....	Mexico.....	1.01465 pounds.
Do.....	Peru.....	1.0143 pounds.
Do.....	Portugal.....	1.011 pounds.
Do.....	Uruguay.....	1.0143 pounds.
Do.....	Venezuela.....	1.0161 pounds.
Liter.....	Metric.....	1.0567 quarts.
Livre (pound).....	Greece.....	1.1 pounds.
Do.....	Guiana.....	1.0791 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Load.....	England (timber).....	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 super- ficial feet.
Manzana.....	Costa Rica.....	1½ acres.
Do.....	Nicaragua and Salvador.....	1.727 acres.
Marc.....	Bolivia.....	0.507 pound.
Maund.....	India.....	82½ pounds.
Meter.....	Metric.....	39.37 inches.
Mil.....	Denmark.....	4.68 miles.
Do.....	Denmark (geographical).....	4.61 miles.
Milla.....	Nicaragua and Honduras.....	1.1403 miles.
Morgen.....	Prussia.....	0.63 acre.
Oke.....	Egypt.....	2.7225 pounds.
Do.....	Greece.....	2.84 pounds.
Do.....	Hungary.....	3.0817 pounds.
Do.....	Turkey.....	2.85418 pounds.
Do.....	Hungary and Wallachia.....	2.5 pints.
Pic.....	Egypt.....	21¼ inches.
Picul.....	Borneo and Celebes.....	135.64 pounds.
Do.....	China, Japan, and Sumatra.....	133½ pounds.
Do.....	Java.....	135.1 pounds.
Do.....	Philippine Islands (hemp).....	139.45 pounds.
Do.....	Philippine Islands (sugar).....	140 pounds.
Pie.....	Argentine Republic.....	0.9478 foot.
Do.....	Castile.....	0.91407 foot.
Pik.....	Turkey.....	27.9 inches.
Pood.....	Russia.....	36.112 pounds.
Pund (pound).....	Denmark and Sweden.....	1.104 pounds.
Quarter.....	Great Britain.....	8.252 bushels.
Do.....	London (coal).....	36 bushels.
Quintal.....	Argentine Republic.....	101.42 pounds.
Do.....	Brazil.....	130.06 pounds.
Do.....	Castile, Chile, Mexico, and Peru.....	101.61 pounds.
Do.....	Greece.....	123.2 pounds.
Do.....	Newfoundland (fish).....	112 pounds.
Do.....	Paraguay.....	100 pounds.
Do.....	Syria.....	125 pounds.
Do.....	Metric.....	220.46 pounds.
Rottle.....	Palestine.....	6 pounds.
Do.....	Syria.....	5¼ pounds.
Sagen.....	Russia.....	7 feet.
Salm.....	Malta.....	490 pounds.
Se.....	Japan.....	0.02451 acres.
Seer.....	India.....	1 pound 13 ounces.
Shaku.....	Japan.....	11.9305 inches.
Sho.....	do.....	1.6 quarts.
Standard (St. Petersburg).....	Lumber measure.....	165 cubic feet.
Stone.....	British.....	14 pounds.
Suerte.....	Uruguay.....	2,700 cuadras (see cua- dra).
Sun.....	Japan.....	1.193 inches.
Tael.....	Cochin China.....	590.75 grains (trov).
Tan.....	Japan.....	0.25 acre.
To.....	do.....	2 pecks.
Ton.....	Space measure.....	40 cubic feet.
Tonde (cereals).....	Denmark.....	3.94783 bushels.
Tondeland.....	do.....	1.36 acres.
Tsubo.....	Japan.....	6 feet square.
Tsun.....	China.....	1.41 inches.
Tunna.....	Sweden.....	4.5 bushels.
Tunnland.....	do.....	1.22 acres.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalents.
Vara.....	Argentine Republic.....	34.1208 inches.
Do.....	Castile.....	0.914117 yard.
Do.....	Central America.....	32.87 inches.
Do.....	Chile and Peru.....	33.367 inches.
Do.....	Cuba.....	33.384 inches.
Do.....	Curaçao.....	33.375 inches.
Do.....	Mexico.....	33 inches.
Do.....	Paraguay.....	34 inches.
Do.....	Venezuela.....	33.384 inches.
Vedro.....	Russia.....	2.707 gallons.
Vergees.....	Isle of Jersey.....	71.1 square rods.
Verst.....	Russia.....	0.663 mile.
Vlocka.....	Russian Poland.....	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
 Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
 Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
 Gram equals 15.432 grains.
 Decagram (10 grams) equals 0.3527 ounce.
 Hectogram (100 grams) equals 3.5274 ounces.
 Kilogram (1,000 grams) equals 2.2046 pounds.
 Myriagram (10,000 grams) equals 22.046 pounds.
 Quintal (100,000 grams) equals 220.46 pounds.
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
 Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
 Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
 Liter equals 0.908 quart.
 Decaliter (10 liters) equals 9.08 quarts.
 Hectoliter (100 liters) equals 2.838 bushels.
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measures.

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
 Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
 Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
 Liter equals 1.0567 quarts.
 Decaliter (10 liters) equals 2.6418 gallons.
 Hectoliter (100 liters) equals 26.417 gallons.
 Kiloliter (1,000 liters) equals 264.18 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
 Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
 Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
 Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.

Hectometer (100 meters) equals 328 feet 1 inch.

Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).

Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.

Are (100 square meters) equals 119.6 square yards.

Hectare (10,000 square meters) equals 2.471 acres.

CONSULAR REPORTS.

COMMERCE, MANUFACTURES, ETC.

Vol. LX.

AUGUST, 1899.

No. 227.

SPECIAL TAXATION FOR DEPARTMENT STORES IN GERMANY.*

It was but natural that Germany, where the control and protection of individual and commercial rights and responsibilities are defined and enforced by law to a further extent than in perhaps any other country, should have been among the first nations to consider seriously some special measure to restrict and equalize the advantages which large department stores enjoy over small retail dealers in various branches of trade. Department stores founded on the general plan of the Bon Marché and Magasins du Louvre at Paris were introduced into Berlin and other leading German cities only a few years ago; but as early as 1896, the protest against them from the smaller merchants became so energetic that Herr von Brockhausen, a Conservative member of the Prussian Diet, introduced into that body a resolution, indorsed by many of his colleagues, which declared that—

The Prussian Diet hereby requests the Royal Government to formulate and enact a law levying a special progressive tax upon department stores, bazaars, and similar institutions which come within the scope of the excise-tax law (*Gewerbesteuer-gesetz*) of June 24, 1891, and that the proceeds of such special tax should revert to the respective cities and districts in which such stores are located.

Similar resolutions were adopted by the legislative assemblies of the Kingdoms of Bavaria and Saxony, the former on November 14, 1895, and the latter on March 23, 1896. But nothing further came of the movement at Berlin than an academic expression of opinion that some additional tax or burden should be imposed upon all great

* This report was obtained at the request of a Washington press association, to the manager of which proof has been sent.

mercantile organizations which, through the magnitude of their business and their combination of numerous special lines of trade under one direction, secure advantages in respect to purchase and economy of management against which smaller dealers, doing business by old and slower methods, are unable to compete.

It was urged that such increased and progressive taxation of the large concerns—and the rate was to be carefully adjusted to the gross amount of business done by each firm annually—would form an effective means of protection to the smaller dealers and, by increasing the local revenues of cities and communes, permit some of the taxes of other tradesmen to be reduced. Another object of the tax was to check the tendency of mercantile business to consolidate into large firms and companies, the effect of which was to oppress and drive out of business the middle classes, which it was the duty of the state to sustain.

The reply of the Royal Saxon Government to these resolutions was to the effect that under the imperial license regulations (*Reichsgewerbeordnung*) only license taxes by the State and local governments could be admitted, and that a progressive tax, which would in the end become practically prohibitive against certain large business houses, would be a violation of the higher laws. Moreover, such a progressive tax could only be adopted by the government of each separate state. Stress was laid upon the confusion and injustice that would result in the very probable event that the different states might impose a wholly different rate, while some of them might decline to enact any such tax at all.

The discussion continued without any definite result, and the measure reappeared at several successive sessions of the Prussian Diet, modified slightly as to details, but embodying in substance the following points:

(1) To impose a special progressive tax upon all mercantile establishments which sell at retail in open stores or warehouses goods of several different kinds, or which deliver such goods to consumers by mail, railroad, or other public method of transportation.

(2) That the tax shall apply to all firms which do an annual business of 300,000 marks (\$71,400), on which might be reckoned a yearly profit of 15,000 marks (\$3,570).

(3) That the tax should be progressive in proportion to the number of different kinds of merchandise kept for sale in any given establishment, as well as to the aggregate amount of business done during the year.

(4) That the kinds of goods included under the provisions of the law shall be stipulated, and shall not include agricultural products that are native to Germany.

(5) The whole revenue derived from such special taxation to be turned over to the local treasury of the city or commune in which the store so taxed is located.

After another interval of several months, during which little was heard of the scheme except newspaper discussion more or less colored by political motives and affiliations, the subject came before the Prussian Diet at its sixty-second session on Wednesday of last week, the 19th of April, and, as the debate which followed clearly portrayed the present attitude of the Government upon the entire topic, a synopsis of the most important speeches is here given as the latest and most authoritative information on the subject.

Herr von Brockhausen brought forward the resolution of June 9, 1896, which was read as given in the five paragraphs above translated. In his speech, which then followed, Herr von Brockhausen pictured eloquently the distress of most small merchants who are located in the neighborhood of large department stores and see their business swallowed up day by day by the resistless attractions of those large capitalized concerns whose power to purchase cheaply and to furnish customers with many kinds of goods in one transaction under one roof has rendered the smaller merchants helpless against such competition. He described the fatal and overshadowing effect of the large stores of this class in Paris, where special legislation against them had been proposed as early as 1843. He spoke of an organization which had been formed in France which includes 40,000 members, all retail merchants, the purpose of which was to resist by legislation and all lawful means the extension of department stores, one of which, the Bon Marché, had, according to the statement of its founder, supplanted at the outset and soon extinguished about 900 small retail shops and stores and now does a business of 160,000,000 francs (\$30,880,000) annually, sufficient to maintain 1,800 to 2,000 stores of the smaller class.

Under the law enacted by the French Assembly in 1880, the tax imposed upon establishments of this class was 25 francs (\$4.83) for every employee and one-tenth of the rentable value of the premises occupied. In 1880, these rates were doubled for all stores in which the number of employees exceeded 200 and trebled where they were more than 1,000. Under this amended law, the Bon Marché, according to the statement of Mr. Brockhausen, pays annually 424,000 francs (\$81,832), the Magasins du Louvre 433,000 francs (\$83,569), and the Printemps 117,000 francs (\$22,581).

In 1889, the French law was again amended, unfairly, as was claimed, because it reduced somewhat the proportional tax on the largest class of department stores, but increased that of the smaller ones which have less than 200 employees. The question is still an

unsettled one in France, where efforts are being made to increase the relative taxation of the great department stores of Paris.

In Germany, continued the speaker, the lead in actual legislation on this subject has been taken by the Kingdom of Saxony, where the Royal Chamber in 1896 adopted a resolution authorizing an *Umsatzsteuer* (tax on annual business) not exceeding 2 per cent of the gross amount, and giving to municipalities and communes the right to impose such taxes for the benefit of the local revenues. Eleven Saxon cities and about twenty smaller towns have availed themselves of the privilege thus accorded, although in several important cities—Chemnitz, Stollberg, Frankenberg, and Merane—the councils have declared against the law as an unjust discrimination against capital.

In closing his speech, Herr Brockhausen declared that there are in Prussia 460,000 independent retail dealers who have incomes of less than 1,500 marks (\$350), and are therefore exempt from taxation on their business; also, 470,000 others whose incomes range from 1,500 to 4,000 marks, and whose invested capital is from 3,000 to 30,000 marks (\$414 to \$4,140) each. All these men, he declared, have no representation in the chambers of commerce, which are ruled by a small minority of capitalists who have no interest in protecting the small shopkeeper. The speaker therefore demanded some definite action on the part of the Prussian Government for their protection.

In answer to this appeal, Herr Burghardt, general director of direct taxation, replied that, while he felt personally great interest in the subject, the Government sees no effective means of relief which would not conflict with the higher law of the German Empire. The Government, he said, could only lighten the burdens of the smaller business men by recommending for them relief from municipal taxation and higher taxation for the wealthier and more powerful business firms; that the matter belonged primarily to the local control of cities and communes; and that, while the Government was not unalterably opposed to the *Umsatzsteuer*, it was of opinion that such a tax would be a measure of doubtful efficiency and should be managed with great caution. A tax the object of which is to restrict any business enterprise within certain prescribed limits would be in any case unlawful and subversive of public interests. Experience in France had shown that such legislation had thus far proved practically ineffective; and, notwithstanding the law there had been first proposed in 1843 and amended successively in 1880, 1889, 1890, and 1893, it was still unsatisfactory. The business of the large department stores increases steadily, and the complaints of the smaller merchants there are still unappeased.

The last proposition in France had been to increase by 17 per

cent the already high special tax on department stores, but public opinion had condemned this increase as excessive and the measure was defeated.

"I can only hope," said Mr. Burghardt in conclusion, "that the communities (*i. e.*, municipalities) will take this subject in hand, and I can assure them that the State Government stands ready to assist them in finding a solution to this important question."

After a lengthy debate, in which several members, including Herren Darbach and Gothein, took an active-part, Vice-President von Miquel, secretary of the Prussian Treasury and probably the ablest statesman of Germany on questions of taxation and revenue, rose and spoke for the Government. Dr. Miquel stated that he had listened with great interest to the debate, but regretted that none of the speakers had presented any practicable solution of the difficult problem. He continued as follows:

What has been done on this subject in Saxony and Bavaria has hardly passed the incipient stage of experiment; but, taken in connection with the legislation in France, it proves that there exists a widespread demand for an enactment that shall fill a recognized gap in tax legislation, for which no complete answer has thus far been found. The movement in France has been a social, not a financial, one. Its aim has been to protect the smaller merchants of cities and towns; but this result has not been reached, and all the discussions have evolved no real solution of the trouble.

Meanwhile, great reforms in taxation have been made in Germany. About half of all mechanics and a great number of small merchants are entirely exempt from income taxes, which increase progressively upward so as to bear most upon those best able to pay them. With us the *Gewerbesteuer* (tax on trade) is no longer a State, but a local, tax; so that the difficulty of further legislation is much greater here than in France.

In the second place, legislation in the proposed direction might very easily come into conflict with the laws of the Empire and established business regulations (*Gewerbeordnung*).

Thirdly, if we in Prussia should enact a law that would overcome all these difficulties, we would have to immediately reckon with the competition of other German states which would adopt a different policy.

For the Imperial Government to undertake to solve this problem would be of doubtful expediency, since the introduction of direct taxation upon business would militate against the financial autonomy of the state governments. I think from all indications the chances of an agreement between the federal states on the question of taxation are very remote. We have therefore appealed to the communities (cities and communes), and we leave this question to them. Several cities have already introduced such special taxation against large department stores, but we have as yet no sufficient knowledge of their experience to form any guide for further legislation. I personally am of the opinion that existing conditions in the different communities are so various, their relations to the great business houses so different, that the only safe method is to let them decide for themselves what is the best to be done. It would be extremely difficult to make a General Government law for large and small cities alike, since the development of business varies radically in different countries and districts. One thing is certain, social and political justice

could only be approximately reached by taxation; no tax can cover and fit exactly every socio-political condition. Exaggeration in this direction, the attempt to change economical conditions and commercial relations by taxation alone, might lead to dangerous consequences. The whole road is beset with dangers and difficulties that can be only dimly foreseen.

If the smaller merchant is protected against the overshadowing department store, the mechanic might with equal justice demand protection from the great industrial factories. The blacksmith might say, "I demand protection from the great forges and factories that manufacture wrought-iron products so cheaply that I can not exist." The shoemaker would demand a high tax upon the shoe factory that turns out shoes by machinery—and so it would go. Where should we draw the line? I am in favor of measuring taxation according to the capacity to pay. That is the great progressive principle which we have introduced into our system of taxation. But to deviate radically from this principle in order to reach a certain social result, and to surrender the principles of capability and equality before the law, would be a policy to be followed only with extreme caution and self-restraint. It is not the mere technical difficulties of such a tax, but grave considerations based on general principles, which have prompted us to rather promote and encourage local municipal taxation. The question is by no means closed to us with this debate. I consider a heavier taxation of the great mercantile establishments to be perfectly justified, and if this can not be successfully accomplished through the local authorities, I shall not lose sight of the question, but may, if necessary, finally return after all to state taxation for that purpose.

We owe to the small merchants and oppressed business men a frank statement of the entire truth; we can raise no false hopes that can not be realized. The situation must be studied in all its aspects, and I can only say that so far as we can help you we will gladly do so, as soon as the best method of procedure can be discovered.

This, therefore, is the present status of this important question in Germany. The Prussian and other state governments concede that a special tax on department stores would not only be equitable, but is urgently demanded by existing conditions. On the other hand, they consider the French law a failure and see no satisfactory means of adapting a state or imperial law to the complex requirements of the situation, and the whole subject is therefore thrown back upon local administrations of cities and communes, which in Saxony and Bavaria have made some tentative experiments in taxing department stores, with but indifferent and indecisive results.

Some members of the Reichstag and Prussian Diet are in favor of imperial legislation on this subject, but they are only a minority. The question is complicated with party politics in a manner which is difficult for a foreigner to comprehend, beyond the fact that Berlin, which is socialistic in politics, is either indifferent to the proposed legislation for the protection of the small merchants or is openly opposed to it.

FRANK H. MASON,
Consul-General.

BERLIN, *April 27, 1899.*

PREPARATION OF VERMUTH IN EUROPE.

At the request of a Chicago correspondent, a Department instruction was sent, under date of January 28, 1899, to consular officers in France and Italy asking for information in regard to the preparation of vermuth. The replies are given below.

FRANCE.

HAVRE.

The manufacture of vermuth in France is confined almost entirely to the city of Marseilles, where all the important manufactories exist. The article is made from ordinary white wine, which is produced extensively in the region of which Marseilles is the principal center, and which, on account of its abundance, is very cheap. A pure, wholesome white wine may be bought in the south of France for about 14 cents per gallon.

While figures showing the production of wine in France are published every year by the Government, no statistics are kept concerning either the production, consumption, or exportation of vermuth. In the returns of both the French and American custom-houses, vermuth is classified as wine, and for that reason it is impossible to estimate the quantity shipped abroad.

The two principal points in Europe from which vermuth is exported to the United States are Marseilles, France, and Turin, Italy; and from the declared exports sent to the Department of State by our consuls at these places, an approximate idea can be formed of the quantity of foreign vermuth consumed annually in the United States. During the fiscal year ending June 30, 1898, the vermuth shipped from Marseilles amounted in value to \$51,586.91. The French vermuth is sold wholesale f. o. b. Marseilles at \$3.28 per case of 1 dozen bottles, and it is accordingly apparent that about 15,728 cases were shipped from that port to America during the year in question.

Vermuth is simply an infusion of certain plants and bitter aromatic herbs and roots in a quantity of wine whose degree has been strengthened by the addition of about one-ninth of its bulk of alcohol, in order to bring the wine, which is usually of not more than 10° alcoholic strength, up to 15°. The alcohol used should be pure, clear, and of about 85° in strength.

The following are the ingredients of ordinary French vermuth:

Articles.	Quantity.	Articles.	Quantity.
Dry white wine.....gallons...	18.48	Centaury pounds...	2.2
Muscatel wine.....do.....	5.28	Peruvian bark.....grains...	385.7
Wormwood.....pounds...	2.2	Aloes do.....	77.15
Bitter-orange peel.....do.....	2.2	Cinnamon do.....	154.30
Camomile do.....	0.55	Nutmeg do.....	154.30
Water germander.....do.....	0.55	Alcohol, at 85°.....gallons...	2.64
Florentine iris root.....do.....	0.55	Raspberry juice.....fluid ounces...	13.52

These proportions are sometimes varied, while vermuth can be made out of certain other ingredients, as, for example, those given below:

Articles.	Quantity.	Articles.	Quantity.
Wormwood.....pounds...	2.2	Curaçao bark.....pounds...	0.27
Red Peruvian bark.....do.....	1.1	Peach pits.....do.....	1.1
Florentine iris root.....do.....	0.88	Origan do.....	0.55
Veronica do.....	1.1	Semen contra.....grains...	771.4
Pulmonaria.....do.....	1.1	Little centaury.....pounds...	0.275
Holy thistle.....do.....	1.1	Water germander.....do.....	0.275
Elder flowers.....do.....	1.1	Brandy, at 40°.....gallons...	4.22
Rhubarb.....grains...	9.2	White sugar.....pounds...	13.2
Sweet-orange peel.....pounds...	1.1		

The inventor of the last formula states that the herbs and other vegetable ingredients should be allowed to remain in the wine for a period of two months, the solution being stirred every fifteen days. After the expiration of two months, the wine is drawn off into another barrel and is allowed to remain therein for two weeks, after which it is drawn off a second time. In the event of the vermuth being cloudy, which is often the case, the manufacturer resorts to the simple process known as "collage," which consists of stirring in some boiled milk, in the proportion of 1 pint to 26 gallons of vermuth. The white of a single egg, well beaten, for each 26 gallons, or about half a fluid ounce of fish glue, is also used for this purpose. The vermuth should be allowed to remain in the barrel for about five days after the collage, after which time it may be drawn off and filtered.

If the vermuth thus made is not sufficiently sweet, a little sweet wine or rock-candy sirup may be added. Its degree of sweetness, however, should not exceed 5° to 7° on the Baumé scale. Newly made vermuth has a flavor of herbs, which is sometimes a trifle too pronounced. Age alone causes the disappearance of this.

Certain manufacturers, instead of putting the herbs and other ingredients directly into the barrel, first inclose them in a linen sack,

which is then suspended in the barrel of wine. The sack is withdrawn every five or six days, the liquid expressed from it into the wine, and the sack again suspended. It is left in the wine for a month, at the end of which time it is taken out, all the liquid pressed out of it, and the fluid thus expressed returned to the barrel.

Other manufacturers first make an alcoholic extract of the ingredients, which extract is afterwards mixed with the wine in the proportions given below.

To obtain the alcoholic extract referred to, it is but necessary to reduce the dry ingredients mentioned to powder and place the same in about 10 to 12 quarts of alcohol of 85° strength. The solution is allowed to remain standing for a week, after which 19 quarts of alcohol and 7.35 quarts of white wine are added, together with the herbs cut into small pieces. The solution is then warmed in a water bath, which should not be heated above 140° F. After half an hour's warming, it is removed from the fire, allowed to cool and to remain standing for eight or nine days, during which time it should be frequently stirred, in order that the sediment may be brought as much as possible in contact with the liquid. The solution, when perfectly clear, is placed in a large glass vessel, and forms an extract of vermouth. To make the article of commerce, 1.58 quarts of the extract are mixed with 2.11 quarts of white wine.

If, in the simple process of infusion first described, the addition of alcohol to the wine precipitates the tartar contained in the latter and causes cloudiness, the solution should be allowed to stand a few days until it clears, after which the solid ingredients may be added.

The quality of the vermouth manufactured in France depends in a great measure upon the sort of wine used. The wines most employed are those of the valley of the Rhone, Piccardin, Picpoul, certain Spanish wines, and the wines of the extreme south of France.

There is a difference between the French and the Italian vermouth. A number of French manufacturers make Italian vermouth, however; not for the purpose of deceiving the consumer as to its origin, but merely as a type of vermouth distinct in flavor from the article known as French vermouth.

The following are the ingredients which enter into Italian vermouth:

Articles.	Quantity.	Articles.	Quantity.
Sweet white wine (Picpoul).....gallons...	25.08	Cinnamon pounds...	0.22
Wormwood.....pounds...	0.275	Angelica root.....grains...	925.8
Helenium.....do.....	0.275	Gentian.....do.....	925.8
Calamus odoratus.....do.....	0.275	Nutmeg.....do.....	231.45
Centauray.....do.....	0.275	Fresh orange, sliced.....number...	1
Holy thistle.....do.....	0.275	Alcohol, at 85°.....quarts...	5.28
Water germander.....do.....	0.275		

When the process of infusion above described is completed, the manufacturer, or an expert connoisseur identified with his manufactory, samples the vermuth in order to find whether or not it possesses the desired taste. Should the beverage be too bitter, the fault can be remedied by adding a small quantity of wine until, little by little, the proper flavor is reached. If not sufficiently bitter, a small quantity of the solid ingredients, in the proportions given, may be again infused in the wine. Nor is it necessary that vermuth should possess great alcoholic strength to be good. Some manufacturers make vermuth which contains 17° of alcohol, while others keep their product down to 12° . The average strength is from 14° to 15° .

While the formulas given in this report are the ones commonly in use, it is quite possible—in fact, it is even probable—that anyone attempting to make vermuth from them, without having some practical knowledge of the art, would fail to produce an exact or approximate imitation of the article now exported to America. The successful manufacture of beverages requires, without doubt, more technical knowledge of the processes employed than mere reference to text-books and recipes can furnish; and the same deduction may be applied to any of the arts or sciences, from silver plating to operative surgery.

It would accordingly be advisable for persons intending to make vermuth in America to spend some weeks in Marseilles and Turin and endeavor, in spite of the innumerable obstacles with which they would meet, to obtain some practical experience in its manufacture.

JOHN PRESTON BEECHER,
Deputy Consul.

HAVRE, *February 28, 1899.*

PARIS.

I have the honor to state, in reply to Department's unnumbered dispatch of the 28th of January, 1899, that I have been unable to secure any reliable information as to the manufacture of vermuth; in fact, it is a foregone certainty that a request for the formula which a manufacturer employs, the result of which, in all probability, has been the secret of his success and means of accumulating a fortune, would meet with a refusal couched in polite language.

There are three vermuths which are popular in Paris—vermuth de Turin, vermuth quina, and vermuth sec. The origin of the first is indicated by its name; the second is manufactured in Milan, by Fernet; and the third, the most eminent French brand, by Noilly-Prat, at Marseilles.

Of course, it is a well-known fact that the base of vermuth is a

distillation of herbs, combined with a certain white wine; but details of its manufacture, with the proportions of different ingredients, I am, up to the present, unable to ascertain. The prices of the foregoing are, per liter (1.05 quarts), respectively, 3 francs (77 cents), 3.75 francs (90 cents), and 2.50 francs (48 cents).

PARIS, *March 13, 1899.*

JOHN K. GOWDY,
Consul-General.

ITALY.

MILAN.

The principal place of manufacture of vermouth in Italy is Turin, and there is quite an extensive export to South America. Milan is not noted for its vermouth. The exportation to the United States is chiefly from Turin, the value amounting in 1898 to \$184,786.01. The only other point of export was Genoa, and only to the amount of \$836.67. Following is a translation of a letter received from the Chamber of Commerce at Turin, in answer to a letter asking for information:

In 1897, Italy exported of vermouth 1,250 hectoliters in kegs (1 hectoliter=26.417 gallons) and 2,430,000 bottles (each bottle containing about 1 liter, or 1.0567 quarts). As to the total quantity produced in Italy and that consumed in the Kingdom, we have no statistics.

The different manufacturers of vermouth use different formulas, and, while most of them arrive at practically the same results, still each one varies his ingredients so as to give, in his opinion, the best quality of vermouth. One of the leading druggists in Milan obtained for me the following formula:

Articles.	Quantity.	Articles.	Quantity.
	<i>Grams.*</i>		<i>Grams.*</i>
Correandri fructus.....	240	Cloves	7
Strong orange peel.....	56	Pepper.....	10
Absinth.....	14	Cinnamon.....	14
Gentian.....	56	Mace.....	14
Blossom of roses.....	20	Calamo	20
Elecampane	40		

* 1 gram=15.432 grains.

The above is put in 25 gallons of any kind of new, sweet, white wine. All the ingredients are left in the wine until a complete fermentation takes place and there is a simple infusion (usually in eight

or ten days), and the flavor is palatable. The clear part is then filtered and bottled. If sweet wine is used, no other sweetening is needed; otherwise, burned sugar is employed.

WM. JARVIS,
Consul.

MILAN, *April 25, 1899.*

TURIN.

The vermouth of Turin is the best known, most highly esteemed, and extensively sold vermouth that is manufactured. Its popularity in America is witnessed by the steady increase in the amount of vermouth annually exported from this consular district to the United States. In the past seven years, the value of the vermouth thus exported has increased more than threefold. In 1891, the value of the vermouth exported was \$59,942, while in 1898 it reached \$184,786. This vermouth is manufactured in different towns and villages in this neighborhood, but all the important establishments have their principal offices in Turin. There are probably fifty establishments at present engaged in the manufacture of vermouth in this district, employing from two to seventy-five hands each. In 1891, there were but five firms who exported to the United States, and these same firms still continue to control the American export business. The exportation of vermouth from this district for three years to foreign countries, including France, Switzerland, Germany, the United States, and South America, was as follows:

Description.	1894.	1895.	1896.
	<i>Quarts.</i>	<i>Quarts.</i>	<i>Quarts.</i>
In casks.....	1,175,300	1,134,800	1,208,200
In bottles.....	1,901,700	2,252,700	2,172,400

The vermouth of Turin, which is a generic and commercial name for all of the vermouth manufactured in the province of Piedmont, should have for its basis good moscato wine, and it should exhibit:

- (a) Alcohol not in excess, but say from 15 to 17 per cent.
- (b) A slight and pleasant aroma.
- (c) A slight but by no means excessive bitter taste.
- (d) A small quantity of sugar.
- (e) A good rich color; it should be perfectly clear.

For the purposes of this report, it will be necessary to examine but three methods of preparation:

- (1) Vermuth made from natural wine—
 - (a) With vegetable substances.
 - (b) With extracts.

(2) Vermuth made from alcoholized wine.

(3) Vermuth made from new (unfermented) wine.

The basis of all good vermuth is unquestionably a good white wine of the first quality, very clear and bright, by no means acid, but, on the contrary, rather sweet and smooth. The choice of the wine used is of the greatest importance, and the vermuth of Turin owes its popularity not only to special secret recipes employed for mixing the ingredients which are employed in its manufacture, but more especially to the quality of wine used, which is usually a good moscato. Good wine is absolutely essential, for with bad wine only a bad vermuth can be obtained. Moscato is by no means the only wine that can be satisfactorily used to make vermuth; any sort of white wine which has a delicate taste and is sufficiently sweet and also aromatic and of an alcoholic grade between 12 and 14 or 15 per cent at the most will serve the purpose quite as well. It is best to use rather old wine, because, if wine is used that has only recently been made, the vermuth is apt to turn out badly. It will not keep well and will easily become cloudy.

It is proper to state that large quantities of vermuth are actually manufactured without the use of any wine whatever as a basis. These spurious imitations are made exclusively of water, alcohol, extracts of drugs, aromatic herbs, and tartaric acid. These preparations are not properly included in the category of vermuth wines, and are condemned for many reasons.

VERMUTH MADE FROM NATURAL WINE WITH VEGETABLE SUBSTANCES.

The method of treatment is as follows: A quantity of good white wine, as above described, is put into a clean, white wine barrel. Then the vegetable substances which are employed to give taste, color, and aroma to the wine are added. The selection of these vegetable substances and the proportion of each used is a matter of individual taste and judgment. If desired, they may be purchased already mixed from a seed or herb merchant. The desirable quantity and proportion of vegetable substances having been placed in a mortar, they are broken into small bits, but not reduced to a powder; they are then put into a bag of loosely woven cotton cloth which is sufficiently large to permit of the free expansion of its contents. This bag is then placed in the barrel of wine and suspended so that it will remain in the middle of the barrel. This operation, by means of which several vegetable substances are mixed with wine or spirits, is called "digestion." After remaining in the wine for four or five days, the bag is removed and the wine squeezed out of it, and it is then immediately returned to its previous place

in the barrel, where it remains for another five or six days, when the squeezing process is again repeated. This treatment is continued for a month or even more, if it is desired to obtain a more aromatic vermuth. Finally, the bag is removed from the wine and placed under a press to extract any flavoring properties which may yet remain. If now the vermuth does not appear to be sufficiently aromatic, a new bag is filled with vegetable substances as above and is suspended in the wine until the required result is obtained. If, on the other hand, it appears to be too aromatic, a little pure white wine is added. The wine is said to be saturated when these substances cease to give out any further aroma or flavor to the wine, even though there is yet remaining a residue which might be brought out if exposed to a higher temperature. The vermuth having thus been brought to a satisfactory aromatic condition, the next step is to filter it. For this purpose, woolen or flannel filters and filter paper ("Joseph paper," without glue) are employed. These woolen or flannel filters, when new, have a disagreeable taste, and must be carefully washed in hot acidulated water and then in cold water till all trace of this taste has disappeared. The filter, having been properly prepared, is spread over the top of a big bucket, when the vermuth, which has been prepared as above explained, is slowly and carefully poured through the filter. In many of the vermuth factories in Piedmont, filters are used made of cellulose, "alback," "krauss," etc., which give entirely satisfactory results. The clear vermuth is then put into bottles or barrels and is ready for use.

The following is a formula for the preparation of 100 quarts of the Turin vermuth:

Articles.	Quantity.	
	Liters.	Quarts.
Red bitter wine.....	2	2.11
Wormwood:	Grams.	Grains.
Grana	20	308
Sharp	20	308
Mild	20	308
Dittany	25	385
Pulverized sweet flag.....	25	385
Pulverized coriander seed.....	25	385
Pulverized iris.....	100	1,543

The above herbs are mixed in the red wine and warmed over a fire for about two minutes; the wine is then put into a jar and left for ten days, care being taken to thoroughly stir it each day.

At the same time, the following preparation is made:

Articles.	Quantity.	
	<i>Grams.</i>	<i>Grains.</i>
Toncha beans.....	25	385
Sweet marjoram.....	10	154
Nutmeg.....	10	154
Cloves.....	10	154
Semangelica.....	10	154
Yarrow ..	10	154
Saffron.....	10	154
	<i>Liters.</i>	<i>Quarts.</i>
Alcohol.....	2	2.11
Water.....	1	1.06

The above substances, after having been pounded and mixed together, are, with the alcohol and water, put into a basin and placed over the fire for a couple of minutes, or till they are fairly warmed. The liquid is then placed in a tightly closed receptacle, where it is left for ten days. At the end of this time, both of these liquids are drained off by pressure and are then mixed together. Sixty quarts of sweet white wine are placed in a receptacle with two pounds of white sugar and eight pounds of glucose, both of which have first been thoroughly dissolved in water. Eight quarts of alcohol are added; and, lastly, the liquid obtained from the two infusions above described is poured in. The preparation is then placed in a barrel, and, after remaining eight days, it is clarified by the use of fish glue and well stirred. It is then allowed to rest for another eight days, when the vermuth is passed into another barrel, being filtered carefully through a woolen filter prepared with powdered filter paper. The vermuth is then put into casks or bottles and is ready for use.

Another formula for the preparation of vermuth is as follows:

Articles.	Quantity.	
	<i>Grams.</i>	<i>Grains.</i>
Nutmeg.....	10	154
Peruvian bark.....	25	385
Mild wormwood.....	50	771
Sweet flag.....	25	385
Cardamom.....	25	385
Centaury.....	25	385
Elecampane root.....	10	154
Gentian.....	10	154
Angelica root.....	50	771
Wormwood grana.....	50	771
	<i>Liters.</i>	<i>Quarts.</i>
Alcohol.....	3	3.17
Water.....	1	1.06

The above substances, after being pounded and mixed together, are placed in the alcohol and water. The liquid is placed in a tight jar and is thoroughly shaken once a day for ten days. At the same time, the following preparation is made:

Articles.	Quantity.	
	<i>Grams.</i>	<i>Grains.</i>
Tonka beans.....	10	154
Coriander seed.....	30	462
Cinnamon.....	25	385
Dittany.....	25	385
Sage.....	50	771
Basil.....	50	771
Iris.....	25	385
Rasins.....	200	3,084
Mint.....	50	771
Marshmallow flowers.....	50	771
Sweet marjoram.....	50	771
	<i>Liters.</i>	<i>Quarts.</i>
Alcohol.....	3	3.17
Water.....	1	1.06

These substances are also pounded and mixed together and infused in the alcohol and water for ten days, being placed in a tight jar and thoroughly shaken each day. Then, the two liquids are drained off as above described and mixed together. Sixty quarts of sweet white wine are then placed in a barrel with 28 quarts of water. Two quarts of water are boiled, and in this are dissolved 2 pounds of sugar and 8 pounds of glucose. This is poured into the barrel, together with 4 quarts of alcohol. The preparation is then treated as above described.

VERMUTH MADE FROM NATURAL WINE WITH EXTRACT.

Vermuth, when manufactured upon a large scale, is generally made by adding to the natural wine a special extract or alcoholic infusion prepared from special recipes by each firm. These recipes vary with each manufacturer, and the secret of their preparation, the constituent elements, and the relative proportions of the different substances employed are secrets which are most jealously and successfully guarded. This extract of vermuth, after being prepared, is kept tightly closed in wooden barrels. When vermuth is to be prepared, a certain proportion of this extract is mixed with good, old, clear, white moscato wine, and when the liquid has been filtered, the vermuth is ready to be used.

The extract of vermuth is usually prepared by taking the necessary drugs and aromatic herbs and putting them into digestion (see above) for eight days with rectified alcohol of 95°, keeping the bucket carefully closed all the while. This process should be car-

ried on at a temperature of 120° F. The bucket should then be placed over a rather slow fire and permitted to remain at a moderate heat for twelve hours. After the liquid has cooled, it is turned into another bucket; the substances infused are then subjected to powerful pressure, and when all the liquid has been pressed out, the mixture is carefully filtered and the alcoholic infusion or extract is ready for use.

Professor Attavi, in his work on Italian wines, says:

It is impossible to give the recipes for making vermouth. The manufacturers, and particularly the best-known firms, keep jealously their own secrets. Special extracts of vermouth can be purchased from the principal manufacturing firms of Turin. About 2 quarts of this extract of vermouth will be necessary for each 100 quarts of wine. The price of the vermouth extract is about 80 cents per quart.

A prominent druggist in Turin makes an extract which he calls "vermuthine," from which he claims may be prepared good vermouth of Turin, as follows:

First, with dry wine—take 45 quarts of dry white wine, add 14 or 15 pounds of white sugar and 1 quart of vermuthine.

Second, with sweet wine—take 43 quarts of sweet white wine, add 7 or 8 quarts of alcohol of 36° Baumé and 1 quart of vermuthine.

Third, ordinary quality—take 40 quarts of good pure water, add 12 to 14 pounds of white sugar, 6 or 7 quarts of alcohol of 36° Baumé, and 1 quart of vermuthine.

The price of the vermuthine is about \$2 for a sufficient quantity to make 50 quarts of vermouth.

The following is a formula for the preparation of extract of vermouth:

Articles.	Quantity.	
	Liters.	Quarts.
Alcohol, 90°.....	8	8.45
	Grams.	Grains.
Coriander seed.....	800	12,344
Nutmeg.....	200	3,086
Greek nuts.....	200	3,086
Cloves.....	100	1,543
Ceylon cinnamon.....	100	1,543
Peruvian bark.....	200	3,086
Dittany.....	50	771
Rose leaves.....	100	1,543
Yarrow.....	180	2,777
Hyssop.....	150	2,314
Sweet marjoram.....	180	2,777
Semiangelica.....	50	771
Wormwood, sharp.....	720	11,109
Roman wormwood.....	720	11,109
Sweet flag.....	200	3,086

After these drugs and herbs have been pounded and broken, they are infused in the alcohol for fifteen days, care being taken to stir the liquid each day. The above quantity of this extract, together with $4\frac{1}{2}$ pounds of sugar and 11 pounds of glucose, may then be added to 85 quarts of white wine, and the result should be about 100 quarts of good vermuth.

VERMUTH MADE FROM ALCOHOLIZED WINE.

Frequently, the wine used in the preparation of vermuth is of very moderate alcoholic strength, and in such cases it is necessary to increase the strength by the addition of good refined spirits to the wine. The alcoholic strength of vermuth varies from 15 per cent, which is almost the minimum (though there is some vermuth containing less alcohol), to 17 per cent, which may be considered the maximum. When it is necessary to add alcohol to the wine, it should be done before the wine has been converted into vermuth. The greatest alcoholic strength is given to the vermuth intended for exportation to northern countries, where alcoholic liquids are more generally favored. It is considered here that the vermuth which is used in Italy and which contains usually 15 per cent of alcohol, and sometimes only 14 per cent, makes a more wholesome drink than the vermuth which contains more alcohol.

The addition of alcohol to the wine which is to be converted into vermuth should be made some time before manufacture, so that ample time may be given for the spirits to thoroughly mix with the wine, and the wine thus treated is also likely to be more clear.

In adding alcohol to the wine, care must be taken not to exceed the alcoholic percentage above indicated; otherwise, there would be obtained a liqueur instead of a wine. The quality of the alcohol to be added is of great importance. Spirits of wine is the best; otherwise, rectified spirits of 95° should be used. The alcohol must be free from any bad taste or smell. Generally, it is necessary to bring the alcohol strength to at least 15 per cent. If the test shows that the wine is of only 12 per cent, this does not mean that there should be added 3 per cent of spirits to bring the wine to the desired strength of 15 per cent, for when the alcohol is mixed with the wine a very perceptible diminution in volume results. The following table shows the quantity of alcohol to be added to wines of from 8 to 17 per cent of alcoholic strength, so as to raise them to the required alcoholic grade:

The alcoholic grade of the wine which is to be increased.										
	8	9	10	11	12	13	14	15	16	17
The percentage of alcohol to which it is desired to bring the wine.	9	1.22								
	10	2.47	1.22							
	11	3.74	2.49	1.24						
	12	5.06	3.79	2.51	1.25					
	13	6.41	5.06	3.84	2.55	1.27				
	14	7.80	6.50	5.20	3.90	2.60	1.30			
	15	9.20	8.00	6.57	5.26	3.94	2.65	1.31		
	16	10.66	9.32	7.98	6.67	5.32	3.99	2.66	1.33	
	17	12.17	10.81	9.45	8.11	6.76	5.40	4.05	2.70	1.35
	18	13.67	12.30	11.00	9.57	8.20	6.85	5.47	4.09	2.70

At the meeting point of the vertical and horizontal columns is indicated the number of quarts of alcohol at 95° which must be added to each 100 quarts of wine. From this table, it will be seen that if a wine of 12 per cent is to be brought up to 15 per cent of alcoholic strength, this will be accomplished by adding to the wine 3.94 quarts of alcohol.

The addition of alcohol is sometimes made directly to the vermouth when it is to be shipped to a distant point. In this case, the requisite quantity of alcohol is placed in the barrel, which is afterwards filled with vermouth. This precaution being taken, there is little danger that the vermouth will not keep in good condition. It is, however, preferable to bring the vermouth to the required alcoholic gradation at the time it is prepared.

VERMUTH MADE FROM NEW (UNFERMENTED) WINE.

This method is little used, the best results having been obtained from the employment of good, old wine. To make vermouth from

unfermented wine, it is best to use moscato grapes, which have been found to yield the best results; but any sweet white grapes may be used for the purpose. The grapes are crushed in a press and the pure juice placed in a barrel till it commences to ferment. When this process is well under way and progressing regularly, the usual combination of drugs and aromatic herbs is thrown into the barrel and briskly stirred with the wine for fifteen minutes. The fermentation then becomes more active, and when it is finished the liquid is drawn off and passed through a woollen filter as above described. Spirits may be added in the quantity necessary to bring the vermuth to the alcoholic strength desired. Instead of mixing the vegetable substances directly with the wine, the indicated substances are sometimes put in a loosely woven cotton bag, which is placed at the bottom of the barrel. Over this the new wine is poured, and from 4 to 6 pounds of white sugar are added. Fermentation shortly commences, and while it lasts the barrel must not be closed, so as to prevent the natural escape of the gas. When the fermentation has ceased, the barrel must be tightly closed and left so for ninety days, when the clear liquid may be drawn off and filtered. The vermuth is then ready for use.

From an examination of the foregoing statements, it will appear that it is not a very difficult matter to simply make vermuth. It may be prepared out of anything from water to good wine as a basis. The difficulty, however, is found in producing a vermuth which is not only satisfactory to the public taste, but which is also reliable and of an unvarying character. The manufacture of vermuth upon a large scale is, as I have pointed out, principally accomplished by the mixing of a vermuth extract with the proper sort of wine. It will, of course, be understood that the vermuth extract is always prepared according to an unvarying and precise formula possessed by each manufacturer. Hence, each produces a distinctive brand of vermuth. The formula once being settled upon, care only is necessary to produce a vermuth extract of unvarying quality. Nevertheless, in the preparation of this article, one of the most difficult problems presented to the manufacturer is the method by which he may obtain a permanent and universally regular standard of vermuth. This result is particularly difficult to attain, because the wines which form the basis of the vermuth vary greatly in aroma, in richness of alcohol, in sugar, and in acidity. It is therefore of the first necessity for the manufacturer to bring his wines to a uniform and established standard by blending different qualities and by adding, as occasion may require, alcohol, sugar, and tartaric acid.

I am indebted for many of the facts above stated to the work by

Professor Ottavio Attavi entitled *Vini di Lusso*, Casale, 1895; to a work published at Casale, 1897, and prepared by Professors Ottavio Attavi and Mariscalchi; and to *Il Liquorista*, by Luigi Sala, Milan, 1897.

PERCY McELRATH,

TURIN, *March 21, 1899.*

Consul.

TREATMENT OF WINES IN FRANCE.

The practical importance of the work done by Louis Pasteur and the thoroughness of his scientific methods have within late years become so well known that it may appear superfluous to add anything to the already large volume of literature concerning them; but the fundamental character of his work is so difficult to fully comprehend that all details concerning its practical application are of importance.

Mr. Gayon, professor of the faculty of sciences at Bordeaux, has recently furnished to the Viticulturists' Society of France a report which, while it contains nothing absolutely new, is a summary of the working of the Pasteur methods in their application to wines. As such details will be useful to the wine producers of the United States, I send a condensed translation of this report:

As those ferments which cause bad results appear most frequently in the vat during the alcoholic fermentation, wine growers should, in the first place, give attention to this fact and make every effort to produce wines which, from the beginning, shall be as free as possible from microbes.

It is for this reason that too high a temperature in the vat must be avoided, that the grapes should be cooled, that they should be left but a short time in the vat, and that tartaric acid should be added to the must when its natural acidity is too slight. If wine thus obtained is of a good quality and really free from germs, it may be afterwards drawn off, gelatined, whipped about to aërate it, manipulated in every way without danger of disease, on the single elementary condition that it shall never be brought in contact with any other than perfectly washed vessels, and never be mixed with contaminated liquids.

But, in spite of all precautions, the wine coming from the vat sometimes contains germs. In such cases, to prevent them from doing harm, it is necessary either to eliminate them or to paralyze or kill them. Whatever method is employed, it must be strictly preventive; no remedy is known for wine once diseased.

Elimination is produced spontaneously, in the course of time, by the action of gravity, the germs settling into the dregs. But, in order that it should be efficacious, it is necessary that the wine tub and fermenting vat should be left at a low and even temperature; low in order to prevent the germs from multiplying, and even so that no interior currents, due to differences of density, may exist, for such currents, instead of allowing the gradual settling of the corpuscles, would diffuse them throughout the whole mass. For the same reasons, the operations of decantation should be carried on in relatively cool weather and while the barometer is high. The wine, whether it has been gelatined or not, should only be decanted or

transferred from one receptacle to another when it is perfectly limpid, and portions which are in the slightest degree turbid should be separated from the rest.

By means of filtration, a more rapid purification may be obtained; but filtration is never perfect unless one employs hollow cylinders of porcelain or porous plates of terra cotta or asbestos. These produce a real sterilization of the liquid.

Filtering is not to be recommended for wines of a fine quality. It is, on the contrary, suited to common wines which are to be used for blending with others or are intended to be consumed while new. Freezing, by eliminating a part of the water through the formation of icicles, renders the wine richer in alcohol, in acids, and in color, and makes it less liable to attack from forms of parasite life.

An attempt has been made to paralyze the germs by the use of antiseptics, and to this end salicylic acid, ammoniacal, etc., have been proposed. These substances, whatever their value for the destruction of microbes, should be carefully used, because they are not without danger to the health of consumers. Moreover, many of them in heavy doses give a disagreeable taste to wine, and if used in too small quantities fail to prevent bad fermentation.* The most radical and rational method for preventing diseases of wine is to heat it; for, by raising liquids to a suitable temperature, all the germs which they contain are killed. The liquids are thus put beyond the reach of any further deterioration. It is important, however, that the heat should not damage the natural qualities of fermented liquids, and especially of wines. That it does not do so in the case of wine and beer was demonstrated by Pasteur, and it is in remembrance of the services rendered by this learned man that sterilization by heating has for a long time borne the name of pasteurization. Recourse to pasteurization should be had as soon as the first symptoms of disease appear, as soon as permanence and vitality of the germs are shown by the microscope, or as soon as analysis shows increasing acidity.

The wine must be heated to a minimum temperature, which depends upon its chemical constitution. For wines which contain a small quantity of alcohol, it is prudent to heat to 65° C.; for wines of average strength, 60° C.; and for wines which are rich in alcohol and in acids, 55° C. will suffice.

No serious inconvenience, however, will result if the temperatures above given are exceeded by a few degrees.

The heating may take place during the first months after the vintage, if the fermentation is completely accomplished. A great advantage of the operation is to be found in the fact that it permits the barrels to be placed with the bung-hole at one side and thus avoids considerable expense of manipulation. Many experiments made in my own laboratory and by different proprietors in the Department of the Gironde have proved that this pasteurization of new wine does not prevent its proper aging.

In order that pasteurization may be successfully accomplished, it is necessary that the wine should be limpid, for otherwise the corpuscles held in suspension might be partly redissolved by the action of the heat and impart, for the time at least, a disagreeable taste to the wine. In any case, the heating produces an effect like that derived from the use of gelatin and renders the wine brighter. If it is desired to preserve all the qualities which the wine has already acquired, without hastening the aging, it should be heated and then rapidly cooled in a close vessel

* NOTE BY CONSUL.—The meaning of bad fermentation, etc., will be understood by recalling the nature of Pasteur's work in wines. Previous to his investigations, the various accidents, deteriorations, etc., in the preparations of wines, which had come to be called diseases, were attributed to rather mysterious influences, very often to the action of the moon, the direction of the wind, etc. Pasteur proved that they were due to the presence of ferments other than those needed for good alcoholic fermentation, to various germs, etc. He further showed that they could be got rid of, or at least made harmless, by subjecting the wine to moderate heat. For beer, he showed that not only certain kinds of ferments, but particular breeds, as it were, were desirable.

in such a manner as to prevent it from coming in contact with the air and absorbing oxygen. If this precaution be neglected, it will assume the characteristics of wine which has been artificially aged, which is only permissible for common wines. Practical operators take advantage of the above facts and succeed, by means of a happy combination of the action of the air and of heat, in blending and harmonizing, in softening wines which are too young, in lowering their color, and, in a word, in making them fit for use sooner.

The heating of wine in bottles fulfills the best conditions of pasteurization. Not only is the destruction of the preexisting germs complete, but the introduction of germs from without becomes impossible and the preservation of the wine is permanently assured.

It also happens that its color and bouquet are kept intact and that it acquires, with age, all its characteristic qualities. In a word, the aging takes place under more favorable conditions.

The conclusion to be drawn from this report is that heating is the best process to be employed for the preservation of all doubtful wines, and that it is greatly to be preferred to any chemical additions, even to the use of tannin or tartaric acid. *

The "casse" which afflicted the wines of Beaujolais and other districts, especially for the crops of 1896 and 1897, is well resisted by this system, which is quite as satisfactory as a good blending. It should be added that many carefully made wines may be kept without having been heated. Pasteurization is for wines whose ability to be kept is doubtful, and from which the germs have not been removed by decantation and the use of gelatin. Undoubtedly, the wholesale trade in wines will realize a constantly increasing profit from the use of this method, which is coming more and more into practical use.

This discovery was made by Pasteur about twenty-five years ago. The fact that it is just coming into practical use shows the power of inertia and routine in France.

JOHN C. COVERT,

LYONS, *April 27, 1899.*

Consul.

OMNIBUS AND TRAM SERVICE IN PARIS.*

Passenger transit in Paris is effected by electricity, steam, compressed air, and horsepower. There are three tramway lines serving Paris and the suburbs, and omnibuses are generally used throughout the city.

One of the above-mentioned tram lines belongs to the Compagnie Générale des Omnibus, and the other two are practically controlled by the same company; so that it can be said to have a monopoly of the entire passenger transit, exclusive of cabs and carriages. It is

* This report was made in answer to inquiries by a Chicago firm, to which Advance Sheets have been sent.

a stock company, organized in 1855, having obtained from the city by conventions of July 15, 1856, and June 18, 1860, the exclusive right to transport passengers from one point to another in the city of Paris. This concession expires on the 31st of May, 1910.

The omnibuses are of two sizes and drawn by two and three horses, respectively. The smaller model is arranged for 28 to 30 places (14 outside, 14 inside, and 2 on the platform). The larger model affords accommodation for 20 on top and 20 inside, including 4 on platform.

The fare on the top is 15 centimes (nearly 3 cents); inside and on platform, 30 centimes (nearly 6 cents). The payment of the last-mentioned fare entitles the passenger to a "correspondence" or transfer ticket to another connecting or intersecting line. No passengers are taken on when the places are filled, either at a station or en route. At the starting points, numbered tickets are handed to the passengers, and when there are more than enough to fill one conveyance the precedence is given to those holding the first numbers. The next omnibus or car starting begins with the number last uncalled on the previous vehicle. The same system prevails at the fixed stations en route for vacant places. No standing in the aisle is allowed.

It is impossible to say what the company paid for the concession, as the remuneration to the city is based upon a percentage and a royalty on the number of vehicles working.

The statistics for 1896 show the number of passengers carried as follows:

33 lines of omnibuses (26 to 30 places).....	50, 030, 034
14 lines of omnibuses (40 places).....	79, 349, 631
3 lines of steam tramways.....	12, 862, 990
23 lines of horse tramways.....	87, 092, 926
4 lines of compressed air and electricity.....	10, 705, 340
Total.....	240, 040, 291

The distances traversed by the divers lines vary from about 2 miles to a little over 4 miles.

The bonds of the Compagnie Générale des Omnibus de Paris are for 500 francs (\$100), 4 per cent interest, and were quoted on the 4th of May, 1899, at 506 francs. Shares of 500 francs denomination are quoted at 1,690 francs. Dividends on the stock are declared after deducting expenses, including stipulated amounts paid to the city of Paris for the concession.

In 1897, the company employed 16,017 horses, and the maximum number of vehicles working in one day was 1,130.

JOHN K. GOWDY,
Consul-General.

PARIS, May 9, 1899.

SLATE TRADE IN FRANCE.*

Slate is used here for window shelves and window tops, steps of indoor and outdoor staircases, kitchen trimmings, and finishing. The slate used for this purpose is brought here from Lavagna, on the Ligurian Riviera, and is a dark-gray article of what I should consider a remarkably inferior quality. I have made a number of inquiries among architects and others touching this slate, and have ascertained that it is not durable and very soon goes to pieces. Taking into consideration the very mild climate here and the entire absence of severe frosts, it may safely be asserted that it would be absolutely useless in our Northern States. Along the Ligurian Riviera it is used for roofing purposes, of such a thickness that it seems to the traveler to consist of slabs of dark-gray stone. I have not been able to ascertain the price at Lavagna, but the charges upon this slate are as follows:

Description.	Charges per 1,000 kilograms (2,204.6 pounds).	
	<i>Francs.</i>	
Cost of transportation by sea to Nice.....	11.00	\$2.12
Duties.....	40.00	7.72
Octroi (municipal duty).....	3.00	.58
Cartage from dock.....	2.50	.48

As far as I can ascertain, slate in the rough is sold as follows:

Description.	Price per square meter (1.10 square yards).			
	Nice.		Lavagna.	
	<i>Francs.</i>		<i>Francs.</i>	
15 millimeters (0.59 inch) thick.....	4.35	\$0.84	1.80	\$0.35
25 millimeters (0.98 inch) thick.....	7.80	1.51	3.00	.58

Roofing slates from Angers, France, are coming into more general employment here, although up to the present the large and heavy terra-cotta tiles have been in universal use. I note that slate tiles have been used lately upon several large villas.

Roofing tiles from Angers, machine cut, cost 52 francs (\$10.04) per thousand; with sides rounded, 62 francs (\$11.97) per thousand.

* This report was made in answer to inquiries by a Pennsylvania firm, to which Advance Sheets have been sent.

The Lavagna slate is sold as follows:

Description.	Price.	
	Francs.	
For balconies:		
0.9 by 0.94 meter (35.4 by 37 inches).....per lineal meter...	10.50	\$2.03
0.95 by 1.18 meters (37.4 by 46.4 inches).....per square meter...	12.00	2.32
Window shelves, with cut step to stop window shutter in closing:		
1.2 by 0.2 to 0.25 meters (47.2 by 7.8 to 9.8 inches).....each...	2.40	.46
0.95 by 0.2 to 0.25 meter (37.4 by 7.8 to 9.8 inches).....do.....	2.10	.41
Same, without step to stop window shutter:		
1.2 by 0.22 meters (47.2 by 8.6 inches).....do.....	1.75	.34
0.95 by 0.22 meter (37.4 by 8.6 inches).....do.....	1.40	.27
1.2 by 0.3 meters (47.2 by 11.8 inches).....do.....	2.70	.52
0.95 by 0.3 meter (37.4 by 11.8 inches).....do.....	2.25	.43
Window tops with molding:		
1.2 by 0.2 meters (47.2 by 7.8 inches).....do.....	1.40	.27
0.95 by 0.2 meter (37.4 by 7.8 inches).....do.....	1.25	.24
Steps:		
1.18 by 0.29 meters (46.4 by 11.4 inches).....do.....	3.00	.58
0.95 by 0.29 meter (37.4 by 11.4 inches).....do.....	2.50	.48
Irregular shape, but 0.29 meter at center.....per lineal meter...	4.50	.87
1.18 by 0.35 or 0.33 meters (46.4 by 13.7 or 12.9 inches), with under support (back support).....each...	5.00	.97
Same, 0.95 instead of 1.18 meters.....do.....	4.00	.77
Same, irregular shape, 0.29 meter at center.....per lineal meter...	5.50	1.06

The following are the customs duties upon slate entering into any port in France:

Description.	Duty per 100 kilograms (220.4 pounds) gross weight.	
	Francs.	Cents.
Slabs of all kinds, cut or sawn, rough or polished.....	4.00	77
Slate tiles for roofs.....	1.40	27
Framed or unframed slates for school purposes or blackboards.....	5.00	97

I have heard that at Saint Sauveur, a hamlet about 6 or 7 kilometers (3.7 to 4.3 miles) distant from La Tinée, a station on the Southern Railway, there are strong surface indications of the existence of dark-purple slate. Nothing is being done to develop it. Even if the quality were good, I am sure that the very expensive transportation would prevent its use.

It might be worth while to forward samples to F. Repossi, Commission, rue d'Amérique and Place Washington, Nice. This gentleman is working hard to create a direct importation of American products, under the surveillance of my vice-consul, and if sufficiently encouraged he intends to open a large sample room of American goods exclusively, with the object of developing a direct import trade from the United States by sea.

HAROLD S. VAN BUREN,
Consul.

Nice, May 8, 1899.

FREE ZONES IN FRANCE.

In my annual report* I described the plan of the Society for the Defense of Commerce for the creation at Marseilles of a free zone into which imports might be brought, manufactured or manipulated there, and then reexported without payment of any sort of duty or incurring any restriction whatever. It is very generally believed that the decadence of French commerce can be arrested and a movement commenced in the opposite direction, if the free-zone project can be enacted into law. The enterprise has now taken definite and extended form under the parliamentary leadership of certain deputies from Marseilles, Havre, and Bordeaux, who have drafted a proposition for the consideration of the French Chamber, by the terms of which free zones shall be created at all seaports and interior cities. The following is a translation of the text of their proposition:

ARTICLE 1. There shall be established in all cities in which the municipalities or chambers of commerce so demand free zones, denationalized from the custom-house point of view, in which all manipulations or transformations of merchandise may be effected without restraint.

ART. 2. The free zones are conceded to all municipalities or chambers of commerce for a period of twenty years at a minimum.

ART. 3. The custom-house authorities shall have no right of surveillance or control over the manipulations or transformations of merchandise effected within the free zones; their rôle will be limited to surveillance of the bounds of the free zones and to escorting merchandise from the importing vessel or the railway station of arrival to the free quarter, and, inversely, from the free quarter to the railway station or ship of departure. The entry of merchandise into the free zone and shipment of the same shall be free of all dues.

ART. 4. The free zones being created solely to facilitate the manipulation and transformation of products designed for exportation, the minimum tariff, increased by the storage-warehouse fees, will be applied to all products of the free zones introduced into France for local use or consumption.

ART. 5. To permit of the immediate application of the principle of this proposition in cities not supplied with free zones, and until such zones can be arranged, restricted areas may be set aside by prefectoral order, where the provisions above described may be carried out temporarily.

The authors of the foregoing furnish an argument in its favor, and cite Hamburg, Copenhagen, Stettin, and Genoa as ports in which commerce finds privileges such as are sought to be extended to cities of France.

ROBERT P. SKINNER,

MARSEILLES, *May 6, 1899.*

Consul.

* See Commercial Relations, 1898, Vol. II, p. 215.

ELECTRIC TRACTION IN MARSEILLES.

Several inquiries have recently been sent to the consulate at Marseilles concerning passenger transit, concessions, rates of fare, and possibilities open to investors. In reply to these, and for the benefit of the public, it may be said that shortly before the writer took charge of this post a convention was concluded between the city and the Compagnie Générale Française de Tramways of Paris, whereby the latter secured a concession for the principal streets of the municipality. The concessionnaires are now revolutionizing the traction system of the city, and in the course of the year electric motors will be in operation on every important thoroughfare.

Until the present time, Marseilles has had an inadequate service of horse cars and omnibuses. Under the new order of things, many of the omnibus lines will continue, for a time at least, but the horse cars will be retired. The concession will expire on December 31, 1950, and, as required by French practice, it has been ratified by both the city and the State. The system of traction is known here as the Dickinson overhead trolley. The company is obliged to replace in perfect order, and to pave when necessary, the surface of the streets disturbed between tracks, including the space between double tracks, and an additional strip 35 centimeters (14 inches) wide along each outside rail.

At the present time, the fares on various lines are regulated by distance. In the heart of the city, the usual fare is 10 centimes (2 cents), and for longer rides as much as 40 centimes. When the electric lines are installed, the uniform fare of 10 centimes only will be charged. To the city, the company will pay an annual fee of 100,000 francs (\$19,300) for the use of the streets, and when the gross receipts for a year aggregate 7,000,000 francs a supplementary fee will be paid, as follows: For the eighth million, 40,000 francs (\$7,720); for the ninth million, 50,000 francs (\$9,650); for the tenth million, 60,000 francs (\$11,580); and for every million over ten, 60,000 francs.

Electric trains will not be composed of more than four cars. The length of the train must not be over 36 meters (118 feet), and the speed must not exceed 20 kilometers (12.42 miles) per hour.

Upon the expiration of the concession, the State will become the owner of the tracks and appurtenances, and all other property of the concessionnaires located on the public domain; and during the last five years of the concession, should it appear that the operating company fails to maintain the property in good condition, the State reserves the right to seize all the company's revenues for the purpose

of keeping up the same. The State will have the right to take all rolling stock, tools, and similar movable property at a valuation fixed by experts, but will be under no obligation to buy more than suits its purposes or wishes. Upon the termination of the concession, should the State deem it useless to continue the operation of certain lines, the concessionnaires will be required to remove their tracks and restore the streets to their original condition.

The State reserves the right to purchase its concession at any time. The price, in such event, will be fixed by the net annual revenue of the seven preceding years, including the fees paid to the city. From the total thus obtained will be deducted the net revenue of the two least profitable years, and the average of the five remaining years will stand as the amount of an annuity to be paid to the concessionnaires during each unexpired year of the revoked concession.

ROBERT P. SKINNER,

MARSEILLES, *May 2, 1899.*

Consul.

WINDOWS AND DOORS IN MARSEILLES.

A series of questions having been put to me concerning the possibility of introducing factory-made window sashes and doors in France, I wish to say first that the method of interior construction in this country does not resemble our own, and any manufacturer desiring to do business here should visit the country and study the local peculiarities. All building is done to stay, and the light pine doors and sashes often used in America would not do here at all. Furthermore, there are no window frames in France that slide up and down as they do in the United States. The sashes are as long as doors, a double sash being made for each window, opening inward, clamped with a special fastening, and provided with interior and exterior blinds. In this southern country, where winds are severe, the outside shutters have immovable slats and are very heavy. Taking up the questions in detail, I have to say:

There is no existing demand for factory-made doors. The notion prevails that ready-made doors are inferior to the handmade article, and a demand would have to be created.

As to shapes and styles in use, they are many. Sliding doors are unusual. As a rule, even large double doors swing on hinges. The dimensions of single doors of the ordinary type are: Height, 2.2 to 2.25 meters (7.22 to 7.38 feet); width, 80 to 90 centimeters (2.6 to 2.8 feet); thickness, $3\frac{1}{2}$ centimeters (1.4 inches). Doors generally are hung on simple hinges. As no factory-made doors are

sold, prices can not be quoted. For handmade doors of the ordinary variety, the ruling price is 7 francs (\$1.35) per square meter (10.76 square feet), or for double doors 10 francs (\$1.93) per square meter.

One builder ventures to say that from three to five thousand doors are used annually in Marseilles. No dependence can be placed on the guess. The consumption obviously depends on the amount of building.

Doors used here are of local manufacture, the lumber generally coming from Sweden or Norway. There are no special door factories in this city.

I have no suggestions to make as to packing for exportation. No doors are imported. There are no local exporters of doors. Among the most important local contractors are the following:

L. Gassier de Bastide, rue Consolat, 63.

H. Beranger, rue Clothilde, 36.

Jauffret Frères, rue de la Rotonde, 23.

Andre Capel, rue Consolat, 138.

The questions relating to sashes are nearly all answered by the foregoing.

ROBERT P. SKINNER,

MARSEILLES, *April 29, 1899.*

Consul.

COMMERCIAL TRAVELERS IN FRANCE AND DENMARK.

Replying to a series of questions put to me* in relation to conditions affecting commercial travelers in France, I have to say that the months of July and August are the least favorable for business visits in this locality. During the two months named it is always extremely hot, and all who can do so leave for cooler regions. I find that commercial travelers visit buyers and expose their samples in hotels, according to the convenience of the buyers. Exhibition rooms can be secured upon reasonable terms, and porters may be found on almost any street corner, distinguished by the red fez they wear, who execute commissions of all sorts. Their fees are low, though in the case of strangers bargaining is advisable. Errands are run and packages carried for from 50 centimes to 1 franc (10 to 20 cents), with a small addition if a cart is required.

The best hotels of Marseilles are the Noailles, Grand Hotel de Marseille, and the Hotel du Louvre et de la Paix. It is well to make arrangements as to terms without delay, and a pension rate

* By the Philadelphia Museums, to the director of which Advance Sheets have been sent.

for meals, lodging, and service is usually the most economical in the end. At either of the hotels named, the prices average from \$4 per day upwards. There are a host of smaller hotels less pretentious in proportions and terms. Among them, the Hotel de Russie is very good and is agreeably situated. At this hotel, a rate of 10 francs (\$1.93) per day can always be obtained, table wine included. By making a contract for a month, one could remain at the Hotel de Russie for the equivalent of \$50.

American bank notes would be found inconvenient in France. English currency is always at a slight premium. Drafts on one of the many important French banks or a letter of credit would give most satisfaction at least expense to any traveler.

Concerning the legal status of foreign commercial travelers, M. J. Vautier, the director of the Marseilles custom-house, writes me that samples are taxed and the amount paid is subsequently refunded. He says:

Foreign commercial travelers are permitted to buy and sell in France with or without samples. The retailing of merchandise is forbidden. Foreign travelers are received in this country on the same basis as French travelers are received in their respective countries. The European nations which subject commercial travelers to payment of license or tax are Belgium, Denmark, Holland, Russia, Sweden and Norway, and Switzerland. Commercial travelers coming from, or rather belonging to, the countries named must pay in France as much as their Governments charge French travelers. Articles serving as models or samples are entered free of duty in bond for one year. The collector of customs at the frontier or port of entry appraises the goods to be entered, calculates the duty payable under ordinary conditions, and the owner makes a deposit for reimbursement equal to the amount of the duty or else leaves satisfactory bond. The samples are thereupon stamped and marked for subsequent identification, and the importer receives a statement showing the amount paid or nature of bond submitted and describing the merchandise. No expense is incurred for the delivery of the statement or stamping of the merchandise for identification. The merchandise may be sent out of the country either through the place of arrival or elsewhere.

Commercial travelers wishing to do a considerable amount of journeying in France have two ways of getting railway tickets at less than regular fares. The regular fares are rather high, and return tickets are considerably lower in proportion than single-trip tickets. To secure a substantial reduction, one should endeavor to arrange a tour terminating at or near the city of departure. By planning such a route, a ticket for the whole journey may be obtained on such terms that one can even afford to lose several links in the chain of travel. These circular tickets may be had either at the railway stations or at the agencies of Thomas Cook & Son, which are to be found all over the world. The tickets sold by tourist agencies have an advantage in that they are not necessarily limited to France.

A still cheaper plan for the commercial traveler to follow is to

buy a railway "carte de circulation." These tickets may be obtained of the "chef de gare" (station agent) at all of the principal cities. Upon application, that official will supply a blank form upon which the application must be written. An unmounted photograph of the applicant, 3.9 by 2.3 inches in size, must be inclosed with the application. The ticket, when issued, is personal, and the photograph is attached to it. It confers the right to travel at half fare. The fee for the purchase of such a ticket applicable to all French railways is as follows:

Time.	First class		Second and third class.		Third class only.	
	<i>Francs.</i>		<i>Francs.</i>		<i>Francs.</i>	
Three months.....	180	\$34.74	135	\$26.05	90	\$17.37
Six months.....	270	52.10	200	38.60	135	26.05
One year.....	360	69.48	270	52.10	180	34.74

Tickets similar in character, but limited to the Paris, Lyons, and Mediterranean system, are delivered on the following conditions:

Time.	All classes.		Second and third class.		Third class only.	
	<i>Francs.</i>		<i>Francs.</i>		<i>Francs.</i>	
Six months.....	180	\$34.74	120	\$23.16	75	\$14.47
One year.....	240	46.32	160	30.88	100	19.30

Tickets as above described must be ordered five days in advance of delivery, and when lost are replaced on payment of an additional fee.

All foreigners in France are liable to the foreigners' registry tax, amounting to 50 cents a year.

In connection with the foregoing, I am able to submit some information on the same subject relating to Denmark and contained in the Semaphore, the market and commercial authority of Marseilles:

(1) Every foreign commercial traveler should be supplied with a certificate from his house, legalized by the mayor or president of the chamber of commerce of his residence, attesting that he is really the representative of said house.

(2) Every commercial traveler arriving in Denmark with samples should declare them at the first custom-house.

(3) Every foreign commercial traveler in Denmark wishing to circulate freely and to sell his goods wholesale or in small lots to merchants, but not to private persons (which is interdicted by law), before commencing to transact business, should take out at the Danish custom-house a "patent," good for one year, the cost of which is 160 crowns (\$42.88).

ROBERT P. SKINNER,

MARSEILLES, May 9, 1899.

Consul.

TRADES COMBINATION MOVEMENT IN GREAT BRITAIN.

The industrial circles of Great Britain are discussing with great interest a new trades movement which has arisen, and which promises to be of great importance to all industries of this Kingdom.

The untold evils wrought by the engineers' strike in 1897, by which hundreds of thousands of innocent people suffered, several manufacturers were ruined, many millions sterling, in the form of wages and profits, were driven from their natural currents, and some industries transplanted in foreign lands, especially in Belgium, Germany, and the United States; the distressing coal strike in South Wales, which resulted in disaster to all concerned—these and other troubles have emphasized the question which has been before the public for so long a time, viz, Is there not some means of cooperation by which the interests of the employer and the employees may be united, by which these disastrous strikes—so fatal not only to individual comfort, interests, and happiness, but to industry and commercial success—may be prevented?

Mr. E. J. Smith, the originator of this combination movement, has been a successful manufacturer for several years in Birmingham; he has held the different positions of employee, traveler, salesman, and manufacturer in his trade, and has gained knowledge from experience. While far from posing as a theorist or laying claim to be called a political economist, he has brought to the front a system which is recognized by students in Great Britain, Germany, Norway, and Sweden as containing possibilities of better results than any other scheme so far devised.

Mr. Smith visited Limoges recently to confer with some of the manufacturers of that city, and thus an opportunity was afforded me to study the man and his system.

The Hon. Joseph Chamberlain, in moving a vote of thanks to Mr. Smith at a meeting in Birmingham, used the following language:

I do not know whether you are aware that, within the last year or two, he has carried out, in connection with the trade with which he is interested, a great social experiment, the results of which have been truly marvelous. Into a trade in which formerly everyone, whether workman or employer, was dissatisfied, he has brought contentment. Wages, I believe, have been increased, profits have become larger, and, curious to relate, the demand and the production have increased at the same time. This experiment, I believe, is capable of great development. I understood when I was last in Bradford that a great trade in that city, acting on Mr. Smith's suggestions, had agreed to adopt the principles upon which he has secured success. Those principles involve a hearty union between employers and employed, and I

trust that all who find themselves in a difficulty will, at all events, give some consideration to the solution which Mr. Smith believes he has found.

Mr. William Woodall, Member of Parliament, speaks thus of the movement:

I am not quite sure as to how much of real originality there may be in Mr. E. J. Smith's scheme. I suppose most of us have had our theories as to the way in which what he is bringing about should be accomplished. Speaking for myself, I may say that I have thought about it for many years, and I have conceived many plans whereby I could properly divide the profits of my business between my workmen and myself. Unfortunately, I could never carry any of them out, for the simple reason that I could not make any profits to divide. The difference between Mr. Smith's plan and any other seems to be that he first makes the profit for use, and then shows us what we ought to do with it.

In a speech delivered before the Bedstead Manufacturers' Association (the first alliance was formed in this trade), Sir James Smith, ex-lord mayor of Birmingham, used this emphatic language:

I think that not only the manufacturers, but the public and working people, have profited by the work of our association. Since the association was formed, the workmen have had their wages increased to the extent of 25 per cent, which is equal to the addition of £1,000 a week to the wages paid in Birmingham; and I have reason to believe that the wages have been well spent, while the workmen have improved in character and self-respect.

These representative men spoke of the system in glowing terms three years ago, when the combination movement was in its infancy. Since then, such writers as Sidney Webb, professors of Oxford and Cambridge universities, and several political economists of continental Europe have interested themselves in this movement; they are studying the question, and have written approvingly on the subject to its originator.

Seven years have elapsed since the first alliance was formed in the bedstead trade. At the time of its formation, the condition of the industry was most desperate. No manufacturer was making any money, wages were at the starvation point, several firms had already gone into bankruptcy, and a number of others were with great difficulty kept out of the general receiver's hands. Under this system, every one of the bedstead manufacturers has made a profit on goods manufactured, the condition of the workingmen has improved at least 25 per cent, and the business is in as prosperous a condition as any other in Great Britain.

The initial work to be undertaken, when a trade desires to form an alliance, is to ascertain most carefully and conclusively the "actual costs of production." Political economists have stated that these are known to very few manufacturers. Mr. Smith is of a similar opinion. In certain industries, where there is a great deal of intricacy in the manipulation of the raw materials and the manufactured

article, it requires considerable scientific knowledge and patient work to ascertain costs. In one trade, there was a diversity of opinion among manufacturers as to the cost of making the simplest of their articles. It was explained at a meeting just what must be taken into account in making up the estimate of the expenses incident to the fabrication of this article, and each member wrote down his idea of the cost. When their notes were compared, it was found that the costs were £4 17s. 8d. per gross to manufacture, and these same goods were selling at £2 19s. 10d. per gross.

To prevent manufacturing being carried on at a pecuniary loss, a minimum scale is adopted. A representative article, like a certain pattern of bedstead or one dozen plates of a given size and shape, is taken as a basis to ascertain how much it costs to manufacture; the manufacturers agree on the minimum rate at which it can be made; then a certain percentage is added for profits, and this forms the minimum selling price for that article. The manufacturers bind themselves, by the rules of the alliance, not to sell, without the consent of the alliance, below this minimum price. The workmen are also offered certain interests in the success of the business, and, both parties being mutually dependent, there is no occasion for strikes, lockouts, or trade disputes.

The rules of the alliances, as carefully laid down, are as follows:

First. A thorough examination into the costs of production is made in every trade. Mr. Smith does not take the opinion of any one person, firm, or company, but insists upon having the joint experiences and opinions of a large committee placed before him, from which an estimate of cost much more reliable than that which any one manufacturer could supply is obtained. Up to date, Mr. Smith has had before him some twenty trades for examination, and he says that he has not yet found a trade in which one-third of the manufacturers had learned or practiced the art of cost taking. He has come to the conclusion that selling without profit is principally attributable to either ignorance or recklessness, and that once this process of cost taking has been gone through, no trade can lapse into its former condition:

Second. The cost taking includes the fixing of uniform rates for working expenses, carriage, cash discounts, selling commissions, merchants' allowances, rebates to large buyers, and all the incidental costs of trading. Large buyers are given a rebate according to the amount of their purchases from the combination every six months. This is obtained from the secretary of the alliance only, and is granted on all purchases, thus enabling the buyer to distribute his orders throughout the whole alliance, if it suits his purpose to do so. The system of fixing transportation charges places every member of

the combination on an equal footing all over the world, no matter where his works may be situated. To all these expenses is added a proportion of profit which is accepted as the minimum.

Third. Rules are drawn up which govern the alliance and arrange for the investigation of complaints (or even suspicions) of underselling or departure from the regulations. Any charge properly proved is punished by a fine imposed by the general committee, but an appeal to the whole alliance is open to all persons fined. A monthly magazine is issued by the alliance, in which the whole process of investigation is given in each case, names being suppressed. The defendant never knows who his complainant is, so that friction is avoided and inquiry encouraged.

Fourth. In many of the combinations, compensation against loss is guaranteed to all members. It is very significant, however, that not a single application has been made. Various grades of selling prices are also adopted whenever a trade depends upon the quality of the goods and the reputation of makers, so that the unknown and less skillful maker may have a fair chance. It is an automatic arrangement, however, which is adjusted every six months, so that no one can abuse a privilege by selling in a lower grade and taking away the trade of a competitor.

Fifth. Every combination has a large fund for fighting and other purposes. This fund is secured by means of a guaranty at a bank, so that the money does not have to be drawn from the business. Each member guarantees in proportion to his standing in the trade, and he is responsible only for the amount against his name. As the guaranty is not a joint document, there is some risk to the banker who advances the money, which is covered by a payment in cash of 15 per cent of the amount guaranteed. The fund is invested in the names of two trustees, who have from every member of the combination a complete indemnity for its use. Thus, any member breaking away from the combination leaves a certain amount, or may be called upon to pay it, which sum will be used, if necessary, in fighting him. The fund, if used, is replenished by a quarterly levy on all members, according to their standing in the trade.

Sixth. The ordinary expenses of management are met by quarterly levies, made in the same way.

Seventh. A foreign committee is appointed for the collection of statistics and examination into competition. It also makes recommendations, from time to time, as to how to meet this competition. This is sometimes done by underselling, in some particular article, until the foreign competitor either retires or is willing to come to an arrangement. This plan has been most successful in the electrical-fittings trade, in which the Germans were strong competitors.

Eighth. There is no attempt at monopoly or at making a close trade in any of the combinations; due regard is paid to claims of an applicant for admission to a combination. Anyone who has been in the trade for a number of years as a workman or in any capacity is admitted free. He is simply charged for the printed information supplied, but he has to subscribe to all the conditions of membership. Should he have no claims, he is asked to pay an entrance fee in proportion to the amount of capital he is putting into the business. This sum has never exceeded £250 (\$1,216.53).

Ninth. The inducements offered to the work people are as follows:

(a) The wages, hours, and conditions of labor existing at the time the employers' alliance is completed are guaranteed as long as the alliance lasts.

(b) A wages and conciliation board is formed, in which the workmen have an equal right in every way. This board has absolute power to settle all disputes which can not be arranged in the respective works, on terms in keeping with the rules of each alliance. Although this board has not the power to deal with the old wages and conditions, it has the right to settle all new conditions, as they arise, purely on their merits. Any extraordinary conditions already existing may be brought before the board for friendly advice, but it has no power to insist upon changes. But in all new questions its power is absolute; and if an agreement can not be reached, an arbitrator is called in, whose decision must be accepted by both parties. So far, an arbitrator has never been needed. Until the dispute is settled, the workmen accept the employers' terms under protest. When the question is settled by the board, the decision is retroactive, so that the delay necessary to adjust the matter is not prejudicial to either party. Strikes and lookouts are thus made impossible.

(c) The first rearrangement of the selling prices carries with it a wage bonus for the workmen, in proportion to the amount of the average advance. Generally speaking, the first advance on the selling price carries with it a bonus of 10 per cent on the wages, but this varies with the proportion of the wages included in the cost of production; sometimes, it is only 5 per cent bonus. Much depends upon the materials used. If these are metal, the proportion of wages is small and the specific value of material large; if the materials used are clays, the wages are large and the value of the material small. Five per cent bonus on the wages in the latter case may be even more than 10 per cent in the former. Whatever it may be, the first bonus is a fixture as long as the alliance exists. Any additional advance in the selling prices must be made by the consent of the whole board and carries with it a bonus on the wages. Generally, it is a 5 per cent bonus on a 10 per cent advance; this, however, is

subject to a sliding scale, *i. e.*, in the event of a reduction being necessary in the selling prices, from any reason whatsoever, the bonuses are reduced, proportionately, until the first bonus is reached. This can not be interfered with. So far, no bonus has been taken off from the wages in any trade under an alliance. In any trade subject to accidental conditions, such as the rise and fall in the metal markets, manufacturers may alter their selling prices in any way that does not disturb their actual profits, without the bonus being interfered with. Only increase or decrease of actual profits can affect the bonus.

(d) The employers, having formed a union amongst themselves, give their support to trades unionism in every way. They employ none but unionists, so that the workmen must form a union if none exists. On the other hand, the workmen refuse to work for any but associated employers. If, therefore, any member of an alliance leaves it or is expelled for any just reason, his workmen must leave his employment. While such a dispute lasts, the cost is shared equally between the two associations.

It will therefore be seen that workmen secure as their share of the bargain a good union, a minimum wage, a bonus or bonuses according to the extra profits obtained (the first is a fixture), and a wage board on which they have equal representation.

No excessive profits, which would hinder trade, are possible, as the consent of the workmen to any advance must be obtained.

Experience has shown that the workmen are careful not to demand bonuses. For example, in the bedstead trade, the men have refused to receive any further bonus whatever, because they believe that they are now being paid all that they can safely claim. Another safeguard against undue profits is that the trades are left open to everyone. There are no restrictions upon any person entering, beyond a reasonable and proportionate entrance fee to the alliance.

WALTER T. GRIFFIN,

WASHINGTON, *May 11, 1899.*

Commercial Agent at Limoges.

NOTES AND SUGGESTIONS FOR TRADE WITH SCOTLAND.

AUTO CARS.

The motor car has become a familiar object in the streets of Scottish cities, and it is often seen also on the country roads. This vehicle was introduced into Edinburgh by a local auto-car-hiring company early in 1898. During the spring and summer of last year, a car with a seating capacity of eight was run regularly between the post-

office and the Forth Bridge, a distance of about 9 miles. This method of transit gradually won public favor. As the traffic increased, other cars were added. The company, finding the Forth Bridge experiment a success, decided to run motor cars on certain routes in the city. Since these routes were established, the public patronage has increased steadily, and the returns of the company during the current year have been quite satisfactory. The rate of fare is practically the same as the rate on the corporation tramways, averaging 1d. (2 cents) per mile. This is about the rate also, I am informed, in Glasgow, Dundee, Aberdeen, Hamilton, Falkirk, and other cities where auto-car companies are operating. That the motor cars have a promising future in Scotland, there seems little room for doubt. They can be run into the rural districts in every direction, both for passenger and goods traffic. There are almost as few country roads as city streets on which these vehicles can not safely and easily go. An indication of the widespread and growing interest in the motor car throughout Scotland is found in the increasing attention given to the subject by the press. The expansion of the motor-making industry, the changes and improvements in the vehicles, and the development of the street-transit motor lines are now matters of frequent comment.

It is announced that the directors of the Glasgow exposition of 1901 are making extensive provision for an exhibit of these vehicles in the locomotive and transportation department, with facilities for the practical demonstration of their merits. The auto cars now in use in Edinburgh and district are of British manufacture. There seems no reason why an opening should not be found here for American vehicles of this class.

BOOTS AND SHOES.

Ladies' boots and shoes of American manufacture are sold by several of the prominent shops and company stores in this city. The demand for them steadily grows, especially with the better class of customers. They have largely superseded the French boots and shoes; in a word, they are the fashion. American boots for ladies sell at about 19s. (\$4.62) and shoes at about 12s. (\$2.92) a pair. The manager of a leading shop tells me that these boots and shoes are in high favor, owing to their elegant shape and appearance and to their fit. The leather of the uppers in the standard qualities is here considered wonderfully fine—the finest known, in fact—and the stitching is perfect. He finds fault, however, with the sole leather. He says that it is not always the best quality, and the best is required to keep out the dampness in the wet Scottish winters. Therefore, American boots are not in equal demand all the year round, the sales being

appreciably larger in summer than in winter. If this criticism of the sole leather is valid, it should be easy for the American manufacturers to remedy the defect.

PRINTING AND BINDING MACHINERY.

American machinery has become an important factor in the printing and bookbinding trades in Edinburgh. Six large printing establishments have twelve American presses, an average of two each, for book and magazine work. The oldest and most famous house in the city has three. Other printing houses, doing general work, have also introduced American presses. Some of the book and magazine printers have, in addition to the presses, American folding machines, stitching machines, case-making (book-cover) machines, and backing machines. The leading printers express a very favorable opinion of all these classes of American machinery, and, notwithstanding the prices are at present comparatively high, the demand is likely to increase. This means much to American manufacturers in these lines, for, barring London, Edinburgh is the chief center of the printing industry in the United Kingdom. I have heard only one criticism—if I may use this term—of the presses, and that is that their maximum speed is greater than necessary. The backing and cover-making machines give entire satisfaction. The American stitchers introduced are as yet used only in binding the best class of books. The cheaper books, which are coarsely stitched, are sewn on German stitchers.

CEMENT.

A recent issue of an American trade journal contains a paragraph on the growth of the Portland-cement industry in the United States, in which it said that—

During the past year, the leading manufacturers of Portland cement have begun to cultivate systematically the export field, and there is no question that soon American Portland cement will be laid down in large quantities in many foreign markets.

Cement is extensively used in Scotland. The imports of this article at the port of Leith are annually from 55,000 to 65,000 tons. It comes chiefly from England, although Belgium furnishes a considerable quantity.

A commission agent called at this consulate a few days ago to make inquiry about American manufacturers of Portland cement. I gave him the names of several companies. If the article can be delivered here at a reasonably competitive price, it should soon get permanently into the market, as American roofing slates have done during the last ten months.

AMERICAN MEAT IN EDINBURGH.

The public health act of 1897 applicable to Scotland contains provisions in regard to meat inspection which are more severe than the provisions of the public health act of 1875 applicable to England. The Scottish law not only gives the local sanitary officers full control over slaughterhouses, but also empowers inspectors to enter premises within the district of the local authority at any time, search any cart or vehicle or any barrow, basket, bag, or parcel, and examine any animal, alive or dead, or article intended for human food. If it appears to him to be unfit for human food, he may take it away to have it dealt with by a justice. The justice may condemn it and order it to be destroyed, and impose a penalty on the person to whom the condemned article belonged or in whose possession or on whose premises it was found. The department of sanitary and market inspection in Edinburgh was constituted on its present basis, under the public health act of 1897, in May, 1898. During the past year, not only have the slaughterhouses been under careful supervision, but inspectors have paid more than 6,000 visits to the butchers' and other shops. The quantity of meat seized or given up as unfit for human food was 149,163 pounds. One Canadian carcass was seized. Not a pound of American meat was condemned. Inasmuch as the butchers of Edinburgh handle a large amount of American chilled meat—the quantity of American chilled beef alone consumed in Edinburgh (not including Leith) averages 31,500 pounds per week—this evidence of its wholesomeness is noteworthy.

RUFUS FLEMING,

EDINBURGH, *May 11, 1899.**Consul.*

SOUTHAMPTON COLD-STORAGE COMPANY.

I have to report that the Southampton Cold-Storage Company, Limited, has been organized with a capital stock of £250,000 (\$1,216,625).

Notwithstanding the growth of Southampton in the past few years as a receiving and shipping port, very little provision has been made here for shipments of frozen meats, arrangements for the care of these being practically confined to the ports of London and Liverpool. At these two ports the number of cattle and sheep discharged was 1,003,483 in 1896 and 1,111,105 in 1898, being an increase of 107,622. The quantity of meat discharged requiring refrigeration at the same ports was 9,545,600 cwts. (1,069,107,200 pounds) in 1896 and 11,965,569 cwts. (1,340,143,728 pounds) in 1898, showing an increase of 2,419,969 cwts. (271,036,528 pounds).

The Southampton Cold-Storage Company, in conjunction with the London and Southwestern Railway Company, has leased 10 acres of dock and land accommodation on the Test Quay, at the South-western Docks, and will erect the largest cold-storage warehouses in England. They will have a storage capacity of 1,000,000 cubic feet with pens for 2,000 head of cattle. The situation is such that vessels will be able to unload, at any state of the tide, alongside the warehouses, and all goods can be loaded direct from the warehouses to the cars.

The buildings will be ready for occupancy by January 1, 1900, the capital stock having already been subscribed. The company will also have several steamers of 6,000 tons running between here and the United States.

While considerable stock and meat is received from the Cape, Australia, and Canada, yet the bulk of it comes from the United States, and the company is organized with American and British capital, two of the five members of the board of directors being citizens of the United States.

This company will add largely to the business between this port and the United States.

JOHN E. HOPLEY,

SOUTHAMPTON, *May 17, 1899.*

Consul.

RAILWAYS IN SWITZERLAND.*

Firms seeking investments in Switzerland will find the concessions granted for future roads of main interest. In proportion to its area, no country equals Switzerland in the number of railways in actual use and projected, or in the diversified application of motive powers.

The existing roads of Switzerland can be classified in the following manner:

Description.	Number of lines.	Aggregate length.	
		Kilometers.	Miles.
Main steam trunk lines.....	28	3,127	1,943
Narrow-gauge lines.....	24	627	389.6
Cogwheel lines.....	10	91	56.5
Cable lines.....	20	19	11.8
Street-car lines.....	26	143	88.9
Total.....	108	4,007	2,489.8

* Written in reply to requests by railway builders in Chicago, New York, and Philadelphia, to whom Advance Sheets have been sent.

The details as to name of road, address of the management, length of road, power used, etc., will be found in the following officially printed table:

Name of road.	Address.	Opening of first part.	Length.	System used.
<i>Main steam trunk lines.</i>			<i>Kilom.*</i>	
Schweizerische Nordostbahn.	Zurich.....	Aug. 9, 1847	723	Locomotive.
Bötzbergbahn (incl. Koblenz-Stein).	(N. O. B. und S. C. B.)..	Aug. 2, 1875	84	Do.
Schweizerische Centralbahn.	Basel.....	Dec. 19, 1854	328	Do.
Aargauische Südbahn.	(S. C. B. und N. O. B.)..	June 23, 1874	66	Do.
Wohlen-Bremgarten...	(S. C. B., N. O. B., und Gemeinde Bremgarten.)	Sept. 1, 1876	8	Do.
Jura-Simplon-Bahn.....	Berne	May 7, 1855	928	Do.
Bulle-Romont	Bulle	July 1, 1868	19	Do.
Régional du Val de Travers.	Fleurier.....	Dec. 23, 1883	14	Do.
Thunerseebahn.....	Berne	June 1, 1893	27	Do.
Bödelibahn	do	Aug. 12, 1872	5	Do.
Spiez-Erlenbach	do	Aug. 16, 1897	12	Do.
Fribourg-Murten.....	Fribourg	Aug. 23, 1898	23	Do.
Vereinigte Schweizerbahnen.	St. Gall.....	Oct. 14, 1855	279	Do.
Toggenburgerbahn....	Wattwil	June 24, 1870	25	Do.
Wald-Rüti.....	Wald	Sept. 29, 1876	7	Do.
Gotthardbahn	Lucerne	Dec. 6, 1874	276	Do.
Jura Neuchâtelois (Kt. Neuenbg.).	Neuchâtel	July 2, 1857	40	Do.
Tössthalbahn.....	Winterthur.....	May 4, 1875	40	Do.
Uetlibergbahn.....	Zurich.....	May 12, 1875	9	Do.
Emmenthalbahn.....	Burgdorf.....	May 26, 1875	43	Do.
Schweizerische Südostbahn.	Wädenswil	May 1, 1877	50	Do.
Schweizerische Seethalbahn.	Hochdorf.....	Sept. 3, 1883	50	Do.
Kriens-Lucerne-Bahn	Kriens.....	Oct. 25, 1886	3	Do.
Geneva-Annemasse (Kt. Genf.).	(Von der P. L. M. betrieben.)	June 1, 1888	4	Do.
Langenthal-Huttwil.....	Huttwil	Nov. 1, 1889	15	Do.
Huttwil-Wolhusen.....	Willisau	May 9, 1895	26	Do.
Sihlthalbahn.....	Zurich	Aug. 3, 1892	19	Do.
Orbe-Chavornay.....	Orbe	Apr. 17, 1894	4	Electric.
<i>Narrow-gauge lines.</i>				
Lausanne-Echallens.....	Lausanne	Nov. 5, 1873	15	Locomotive.
Echallens-Bercher.....	Bercher	Nov. 24, 1889	9	Do.
Rigikaltbad-Scheidegg-Bahn.	Lucerne (15 V.-15 XI Rigi-Scheidegg).	July 14, 1874	7	Do.
Appenzellerbahn	Herisau	Apr. 12, 1875	26	Do.
Waldenburgerbahn.....	Waldenburg	Nov. 1, 1880	14	Do.
Tramelan-Tavannes.....	Tramelan	Aug. 16, 1884	9	Do.
Geneva-Veyrier	Geneva.....	July 20, 1887	6	Do.
Frauenfeld-Wil.....	Frauenfeld.....	Sept. 1, 1887	18	Do.
Birsigthalbahn.....	Basel.....	Oct. 4, 1887	13	Do.
Brünigbahn (J. S.).....	Berne	June 14, 1888	58	Do.
Voies étroites, Geneva.....	Geneva	June 1, 1889	66	Do.
Ponts-Sagne Ch. de f. (Kt. Ncuenbg.).	Neuchâtel	July 26, 1889	17	Do.

* 1 kilometer = 0.62137 mile.

Name of road.	Address.	Opening of first part.	Length.	System used.
<i>Narrow-gauge lines—Continued.</i>			<i>Kilom.*</i>	
Appenzeller Strassenbahn.	Teufen	Oct. 1, 1889	14	Locomotive.
Rätische Bahn	Chur	Oct. 9, 1889	92	Do.
Berner Oberland-Bahnen.	Interlaken	July 1, 1890	24	Do.
Viège-Zermatt (J. S.)	Lausanne	July 3, 1890	36	Do.
Brenets-Loche	Brenets	Sept. 1, 1890	5	Do.
Sissach-Gelterkinden	Gelterkinden	May 17, 1891	4	Electric.
Grütschalp-Mürren (B. O. B.)	Berne	Aug. 14, 1891	5	Do.
Neuchâtel-Cortailod-Boudry (J. N.)	Neuchâtel	Sept. 16, 1892	11	Electric and steam.
Saignelégier-Chaux-de-Fonds	Saignelégier	Dec. 6, 1892	27	Locomotive.
Yverdon-Ste. Croix	Yverdon	Nov. 27, 1893	25	Do.
Bière-Apples-Morges (J. S.)	Lausanne	July 1, 1895	20	Do.
Apples-L'Isle (B. A. M. bzw. J. S.)	L'Isle	Sept. 12, 1896	11	Do.
<i>Cogwheel lines.</i>				
Rigibahn	Vitznau	May 23, 1871	7	Do.
Arth-Rigibahn	Goldau	June 27, 1873	12	Do.
Rorschach-Heiden-Bahn	Heiden	Sept. 6, 1875	7	Do.
Pilatusbahn	Alpnachstad	June 4, 1889	5	Do.
Generosobahn	Capolago	June 1, 1890	9	Do.
Brien-Rothorn-Bahn	Brienz	June 17, 1890	8	Do.
Glion-Naye	Glion	July 22, 1892	8	Do.
Schynige Platte-Bahn (B. O. B.)	Interlaken	June 14, 1893	8	Do.
Wengernalpbahn	do	June 20, 1893	18	Do.
Gornergratbahn	Sitten	Aug. 20, 1898	9.079	Electric.
<i>Cable lines.</i>				
Lausanne-Ouchy	Laussane	Mar. 16, 1877	1.481	{ Turbine.
Giessbachbahn	Gebr. Hauser, z. Giessbach.	July 21, 1879	0.314	
Territet-Glion (Gl. N.)	Montreux	Aug. 19, 1881	0.320	Water weight.
Glütschbahn (in Lucerne)	Lucerne	Aug. 22, 1884	0.553	Do.
Marzilibahn (in Berne)	Berne	July 18, 1885	0.154	Do.
Drahtseilbahn Lugano	Lugano	Nov. 8, 1886	0.101	Do.
Biel-Magglingen	Biel	June 1, 1887	0.237	Do.
Bürgenstockbahn	Stansstad	July 7, 1888	1.625	Do.
Zürichbergbahn (Limmatquai-Polytceh.)	Zürich	Jan. 8, 1889	0.827	Electric motor.
Beatenbergbahn	Berne	June 21, 1889	0.163	Do.
Salvatorebahn	Lugano	Mar. 27, 1890	1.6	Water weight.
Ecluse-Plan (in Neuenburg)	Neuchâtel	Oct. 25, 1890	1.507	Electric motor.
Lauterbrunnen-Grütschalp (Bob)	Berne	Aug. 14, 1891	0.368	Water weight.
Ragaz-Wartenstein	Ragaz	Aug. 1, 1892	1.207	Do.
Stanserhornbahn	Stans	Aug. 23, 1893	0.76	Do.
St. Gall-Mühleck	St. Gall	Dec. 14, 1893	3.6	Electric motors.
Dolderbahn (in Zürich)	Zürich	July 13, 1895	0.3	Water weight.
Rheineck-Walzenhausen	Rheineck	June 27, 1896	0.799	Electric motor.
Cossonay-Gare (J. S.)	Cossonay	Aug. 28, 1897	1.218	Water weight.
Biel-Leubringen	Leubringen	Jan. 29, 1898	1.22	Do.
			0.9	Electric.

* 1 kilometer = 0.62137 mile.

Name of road.	Address.	Opening of first part.	Length.	System used.
<i>Street-car lines.</i>				
Tramways Suisses:			<i>Kilom.*</i>	
Genfer Tramways.....	Geneva.....	June 19, 1862	16.145	Horses, locomotive, and electric.
Bieler Tramway.....	do.....	Aug. 18, 1877	4.672	Horses.
Städt. Strassenbahn Zurich.	Strassenbahnverwaltung der Stadt Zurich.	Sept. 24, 1882 Mar. 8, 1894	8.892 4.52	Do. Electric.
Vevey-Montreux-Chillon..	Société électrique, Vevey-Montreux.	June 6, 1888	10.49	Do.
u. Trait-Planches	do.....	July 6, 1898	0.38	Do.
Berner Tramway:				
Alte Linie.....	Berne.....	Oct. 1, 1890	2.927	Compressed air.
Neue Linie.....	do.....	May 17, 1894	4.756	Locomotive.
Tramway Bellavista (Monte Generoso).	Hoirie Dr. Pasta Mendrisio.	Aug. 26, 1891	0.54	Horses.
Stansstad-Stans	Stans.....	Aug. 26, 1893	3.455	Electric.
Rollbahn Mürren (Station Mürren-Kurhaus Mürren).	J. Sterchi-Wettach's Erbschaft, Mürren.	July 10, 1894	0.451	Horses.
Tramways de Neuchâtel...	Neuchâtel	Dec. 22, 1894	5.268	Electric.
Zentrale Zurichbergbahn (Bellevue-Fluntern und- Oberstrass).	Zurich.....	Feb. 16, 1895	3.367	Do.
Basler Strassenbahnen.....	Basel.....	May 6, 1895	11.93	Do.
Tramway Lugano.....	Lugano	June 1, 1896	4.538	Do.
Strassenbahn St. Moritz...	St. Moritz	July 5, 1896	1.645	Do.
Allaman-Aubonne-Gimel.	Société électrique, Aubonne.	July 23, 1896	9.916	Do.
Tramways Lausannois (inkl. Abzweigung nach Lutry).	Lausanne	Sept. 1, 1896	10.975	Do.
Tramway Chaux-de-Fonds.	Chaux-de-Fonds	Jan. 1, 1897	2.512	Do.
Altstätten-Berneck	Altstätten	Apr. 6, 1897	11.191	Do.
Trambahn St. Gall.....	St. Gall.....	May 20, 1897	9.282	Do.
Tramways de Fribourg....	Fribourg	July 28, 1897	1.38	Do.
Zurich-Oerlikon-Seebach.	Zurich.....	Oct. 22, 1897	5.5	Do.
Zurich (Hauptbahn)-Hardturm.	Zurich III.....	Apr. 23, 1898	2.9	Do.
Winterthur-Töss.....	Stadtrat Winterthur...	July 13, 1898	1.77	Do.
Zurich (Limmatstrasse)-Höngg (Ind. Str. Zurich III).	Höngg	Aug. 27, 1898	2.8	Do.

*1 kilometer=0.62137 mile.

RAILWAYS PROJECTED AND IN COURSE OF CONSTRUCTION.

On September 1, 1898, the number of concessions granted for the building of all kinds of railways, including tramways, or street-car lines, amounted to 120, with a projected length of 2,032 kilometers (1,263 miles). Of this number, 47 are to be equipped with electricity.

The following table gives in detail the name of the road, holder of concession, address, location, length of road, power used, etc.

Concessions.

Name of line.	Holders of concession.	Date of concession.	Projected length.	Cogwheel.	Cable.	Tramway.	System used.
			<i>Kilom.*</i>	<i>Kilom.*</i>	<i>Kilom.*</i>	<i>Kilom.*</i>	
Simplon-Uebergang (Brig-Iselle)†	Jura-Simplon-Bahn (Direktion), Berne.	Sept. 24, 1873	21.5				Locomotive.
Brig-Airolo (Rhodanbahn)	Roman Abt, Ingénieur, Lucerne.	Dec. 23, 1886	61	18.63			Do.
Lugano-Ponte Tresa	Leon de Stoppani, Sohn, Bellinzona.	June 18, 1887	11.24				Do.
Appenzell-Wagenlucke (Säntis)	C. Sonderegger, Appenzell, u. R. Fastenrath, Herlisau.	June 23, 1887	15.5	9			Do.
Solothurn-Münster	Init.-Komitee (Präs. W. Vigier, Ammann), Solothurn.	Dec. 9, 1889	17.1				Do.
Filisur-Samedan (Albulabahn)	G. Gilli, Ingénieur, Chur.	June 17, 1890	32.5				Do.
St. Gall-Zug	Grauer-Frei, Degersheim, und Kons.	June 27, 1890	85.72				Do.
Vevey-Bulle-Thun (Simmenthalbahn)	Comité d'initiative (G. Montet), Vevey.	do	116.57				(?)
Stansstad-Engelberg‡	Verwaltungsrat der elektr. Bahn, Lucerne	Oct. 10, 1890	21.67	6.42			Electric.
Cinukel-Martinsbruck	Rhätische Bahn (Direktion), Chur.	do	56.05				Locomotive.
Berne-Neuenburg (direkte)†	Aktiengesellschaft der Eisenbahn, (Verw.-Rat), Berne.	do	44.75				Do.
Interlaken-Harder	Dr. Michel, Fürspreh, Interlaken, u. Kons.	do	1.45		1.45		Electric.
Spiez-Frutigen†	A. G. Böhler, N.-R., Frutigen, u. H. Hofstetter, Heustrich.	Dec. 20, 1890	15.1				Locomotive.
Schwyz-Seewen	A. v. Hettlingen, Gemeindepräsi., u. Kons., Schwyz.	do	1.65			1.65	Electric.
Schwyz-Brunnen	do	do	5.35				Locomotive.
Berne-Wattenwil-Thun	Gürbenthalbahn-Gesellschaft (Direktion), Berne.	Apr. 17, 1891	3.05			5.35	Compressed air.
Thusis-Filisur	G. Gilli, Ingénieur, Chur.	June 25, 1891	32.15			3.05	Locomotive.
Frutigen-Brig (Lütschbergbahn)	Oberst Desgouttes, Thun, und Kons.	Dec. 23, 1891	22				Do.
Langenthal-Wauwil	Initiativkomitee (G. Bangerter, Nat.-Rat.), Langenthal.	do	62.6				Do.
Murten-Suglez-Ins	E. Girod, Advokat, Fribourg, und Kons.	May 30, 1892	7.6				Do.
Alpnachstad-Altorf	Emil Lussy, Ingénieur, Stans.	June 11, 1892	39.75				Do.

			(?)	(?)		
Martigny-Ville-Salvan-Châtelard..	E. Ludwig und A. Schöpfer, Berne.....	June 21, 1892			Do.	
und Martigny-Ville-Martigny- Bourg.					Do.	
Aigle-Leysin	Ami Chesses, Territet, et E. Barraud, Ingénieur, Bex.	June 24, 1892	5	6.9	Do.	
Niederweningen-Döttingen (Surb- thalbahn).	Aktions-Komitee (C. Frey, Bezirksamt- mann), Zuzach.	do		15.1	Do.	
Tramelan-Saignelégier-Goumois.....	Comité d'init (J. Bouchat, notaire), Saig- nelégier.	June 25, 1892	3.5	26.45	Do.	
Schwanden-Elm (Sernthalbahn).....	Maschinenfabrik Oerlikon.....	do		13.845	Electric.	
Gümligen-Belp.....	R. Bay-Ammann, Fabrikant, Belp.....	Dec. 22, 1892		4.95	Locomotive.	
Trubschachen-Napf.....	W. Hetzel und E. Mark, Ingénieur, Basel.	Mar. 28, 1893	2	13.225	Do.	
Interlaken-Brienz (rechtes Seeufer).	P. Kuster, Brienz, und Kons.....	June 28, 1893		16.555	Do.	
Langenthal-Oensingen.....	Dr. Jakob Kummer und Alfred Egger, Aarwangen.	do		12.41	Do.	
Oensingen-Balsthal†.....	Eisenbahngesellschaft, Balsthal.....	do		4.3	Do.	
Wetzikon-Säfa	Initiativkomitee (J. Schaufelberger, Statth.), Gossau.	June 20, 1893	16		Do.	
Suhr, ev. Entfelden oder Källiken- Sursee (Subrenthalbahn).	Initiativkomitee, Aarau.....	do		25	Do.	
Wimmis-Frutigen.....	G. Anselmier, Ingénieur, Berne.....	Dec. 22, 1893	23		Do.	
Grosswaben-Gurten†.....	Fritz Marti, Winterthur.....	do	14	1.05	Electric.	
Rollbahn Mürren, Fortsetzung nach den Dependenzhotel Victoria und Bellevue.	J. Sterchi-Wettach's Erben, Mürren.....	Apr: 13, 1894	0.235	0.235	Horses.	
Reichenau-Ilanz	Franz Marchion, Ingénieur, Chur.....	June 15, 1894		18.8	Locomotive.	
Ilanz-Disentis.....	do	do		22.3	Locomotive.	
Rapperswyl-Wattwyl event. Ebnat	J. H. Bühler-Honegger und Kons., Rap- perswyl).	June 28, 1894		25.1	Do.	
Ebnat-Uznach	Alt Ständerat E. Schubiger und Kons., Uznach.	do		25.3	Do.	
				28.1	Do.	
				28.43	Do.	
				26.25	Do.	
				26	Do.	
				23.178	Do.	

† In process of construction.

* 1 kilometer=0.62137 mile.

‡ Opened.

Concessions—Continued.

Name of line.	Holders of concession.	Date of concession.	Projected length. <i>Kilom.*</i>	Cogwheel. <i>Kilom.*</i>	Cable. <i>Kilom.*</i>	Tramway. <i>Kilom.*</i>	System used.
St. Immer-Chasseral.....	François Geneux, banquier, et cons., St. Imier.	Dec. 19, 1894	6.775	6.775	.....	.....	Electric.
Jungfraubahn.....	Ad. Guyer-Zeller, Zurich.....	Dec. 21, 1894	12.26	12.26	.....	.....	Do.
Suhr-Reinach event. Menziken (Wynenthalbahn).....	Wynenthalbahnkomitee (Nationalrat Kurz), Aarau.	June 22, 1895	17.15	.....	.....	.....	Locomotive.
Verikon-Hinwil-Bauma.....	Initiativkomitee (W. Nauer), Hinwil.....	June 29, 1895	24.58	.....	.....	.....	Do.
Pruntrut-Laufen (Lützelthalbahn).....	Lützelthalbahnkomitee (Dr. U. Stumm), Basel.	Dec. 16, 1895	35.65	.....	.....	.....	Electric.
Delaberg-Oensingen	Initiativkomitee (Boéchat, Reg.-Statthalter), Delsberg.	Mar. 23, 1896	34	.....	.....	.....	Locomotive.
Pont-Sentier-Brassus (link. Joux-See-Ufer).†	Compagnie de chemin de fer, au Sentier.....	do.....	13.249	.....	.....	.....	Do.
Neuveville-St. Pierre (in Fribourg) & Appenzell-Alttätten	Société du Funiculaire, Fribourg.....	do.....	0.131	.....	0.131	.....	Water weight. Locomotive.
Tramways de Fribourg: Gare-Pérolles	C. Sonderegger, Appenzell, u. R. Fästenrath, Herisau.	do.....	17.6	.....	.....	.....	.....
Gare-Beauregard	Société des — (Conseil d'administration), Fribourg.	June 17, 1896	1.309	.....	.....	1.309	Electric.
Lucerne-Dietschenberg	do.....	do.....	0.57	.....	.....	0.57	Do.
Kl. Scheidegg (W. A. B.)-Laubhorn.....	A. Trautweiler, Ing., Strassburg, u. M. Stocker, Ing., Lucerne.	do.....	1.3	.....	1.3	.....	Do.
Vernayaz-Gueuroz.....	X. Imfeld, Ing., Zurich.....	do.....	1.3	(?)	1.3	.....	(?)
Drahtseilbahn zum Reichenbach-fall (bei Meiringen).†	E. Ludwig, und A. Schöpfer, Berne.	do.....	0.358	.....	0.358	.....	(?)
Göschenen-Andermatt (Schöllenenbahn).....	Gesellschaft (Verw.-Rat), Meiringen.....	June 19, 1896	0.67	.....	0.66	.....	Electric.
Effretikon-Uster-Verikon-SM/a mit Abzweig. Mönchaltorf-Esslingen.	J. Glaser, Ingénieur, Andermatt.....	Dec. 23, 1896	4	2.7	.....	.....	Do.
	Initiativkomitee (Nat.-Rat Stadler), Uster.....	Dec. 23, 1896	29	.....	.....	.....	Locomotive.

Strassenbahnen im Kanton Zug:		Dr. Du Riche-Preller, Ing. u. E. Stauder, Direktor, Zurich.	4-5 5-3 11.7	{	Electric. Do. Do.
Zug-Baar.....	Zug-Cham.....				
Zug-Moosranks-Oberägerl.....	Zug-Moosranks-Oberägerl.....	do	11.7	{	Do.
event. mit Abzweigungen:	event. mit Abzweigungen:				
Baar-Moosranks.....	Baar-Moosranks.....	do	{	{	Do.
Moosranks-Menzingen.....	Moosranks-Menzingen.....				
Muottasbühl bei Samaden.....	Muottasbühl bei Samaden.....	do	1.36	1.36	Water weight or motor. Locomotive.
Berne-Muri-Glimmen-Worb.....	Berne-Muri-Glimmen-Worb.....	do	9.4	9.4	Electric. Do.
Burgdorf-Thun-Bahn.....	Burgdorf-Thun-Bahn.....	do	33.15	33.15	Electric.
Aarau-Schöftland.....	Aarau-Schöftland.....	do	30.716	30.716	Do.
St. Gall-Herisau.....	St. Gall-Herisau.....	Mar. 24, 1897	5.575	5.575	Locomotive.
Städtische Strassenbahn Zurich:	Städtische Strassenbahn Zurich:	Mar. 26, 1897	{	{	Electric.
Hauptbahnhof-Wiedikon.....	Hauptbahnhof-Wiedikon.....				
Kreuzplatz-Hauptbahnhof.....	Kreuzplatz-Hauptbahnhof.....	Mar. 26, 1897	{	{	Do.
Hotel Bellevue-Paradeplatz.....	Hotel Bellevue-Paradeplatz.....				
Hotel Bellevue-Bahnhof Enger.....	Hotel Bellevue-Bahnhof Enger.....	do	2.65	2.65	Do.
Treib-Seelersberg-Beckenried.....	Treib-Seelersberg-Beckenried.....	do	1.88	1.88	Do.
Châtel St. Denis-Bulle-Montboven.....	Châtel St. Denis-Bulle-Montboven.....	do	0.7	0.7	Do.
Châtel St. Denis-Aitalens.....	Châtel St. Denis-Aitalens.....	do	0.975	0.975	Do.
Vevey-Mont Pelerin.....	Vevey-Mont Pelerin.....	July 2, 1897	12.5	12.5	Do.
Altstetten-Zurich-Giessthal.....	Altstetten-Zurich-Giessthal.....	do	16.34	16.34	Do.
Lauterbrunnen-Viip (Breithorn- bahn).	Lauterbrunnen-Viip (Breithorn- bahn).	do	8.065	8.065	Do.
Neuchâtel (Place Pury)-Serrières.....	Neuchâtel (Place Pury)-Serrières.....	do	1.573	1.573	Water weight. Locomotive.
Neuchâtel (Place Pury)-Peseux- Corcelles.	Neuchâtel (Place Pury)-Peseux- Corcelles.	do	4.595	4.595	Do.
Meiringen-Gr. Scheldegg-Grindel- wald.	Meiringen-Gr. Scheldegg-Grindel- wald.	do	52.5	52.5	Do.
Aigle-Ollon-Villars.....	Aigle-Ollon-Villars.....	do	24.7	24.7	Do.
Locarno-Madonna del Sasso.....	Locarno-Madonna del Sasso.....	do	2.3	2.3	Electric.
		do	4.374	4.374	Do.
		do	20.35	20.35	Locomotive.
		Oct. 15, 1897	14.5	14.5	Electric.
		do	0.63	0.63	Water weight.

§ Opened.

‡ In process of construction.

† Partially opened.

* 1 kilometer = 0.62137 mile.

Concessions—Continued.

Name of line.	Holders of concession.	Date of concession.	Projected length.	Cogwheel.	Cable.	Tramway.	System used.
			<i>Kilom.*</i>	<i>Kilom.*</i>	<i>Kilom.*</i>	<i>Kilom.*</i>	
Bex-Gryon-Villars †	Société des forces motrices de l'Avançon, Bex.	Oct. 15, 1897	I. 3.4 II. 4.3 III. 5.128	3.06			Electric.
Chrischonaabahn (Basel-Chrischona).	Initiativkomitee (Dr. R. Hotz-Linder), Basel.	do	6.855				Do.
Lugano (G. B'hof)-Tesserete.	E. Battaglini, Advocat, Lugano.	do	8.2			8.2	Do.
Worblenthalbahn (Berne-Worblenthal zum Anschluss an B. T. B., event. J. S.).	Init.-Komitee (Fr. Hoffmann, Grossrat), Bolligen.	do	12.9				Locomotive.
Ramsey-Sumiswald-Huttwil	Initiativkomitee (Dr. Müller), Sumiswald.	do	20.25				Steam or electric.
Pruntrut-Bonfol	J. Maillat, Gemeinde-Präs, und L. Chofat, Pruntrut.	do	11.41				Locomotive.
Erlenbach-Zweisimmen	J. Schletti-Abegglen und T. Christen, Zweisimmen.	do	24				Do.
Schlieren-Weinigen-Kantons-grenze.	Dr. Du Riche-Preller, Zurich, u. Kons.	do	23				Electric or steam.
Zurich Dietikon-Kantons-grenze.	do	do	21.6				Do.
Samaden-Maloja-Castasegna	Albula-Komitee (P. Planta, Chur).	do	52.2				Do.
Chur-Churwalden-Filsurenbrücke.	G. Brügger-Viel, Churwalden.	do	31.6				Electric.
Rolle-Gimel †	Société du chemin de fer électrique, Rolle.	do	10				Do.
Renens-Lausanne	G. Baatzard, Renens, und C. Bonard, Vevey.	Dec. 17, 1897	3.05				Locomotive.
Planches-Montreux-Glion	Société électrique Vevey-Montreux.	do	0.47		0.47		Electric motor.
Strassenbahn Lucerne und Ausgemeinden. †	Stadtgemeinde Lucerne.	do	8.93				Electric.
Davos Platz-Schatzalp.	Aktiengesellschaft, Davos-Platz	Apr. 15, 1898	0.67		0.67		Water weight.
St. Gall-Romanshorn.	Müller, St. Gall, Schaffeler, R'horn, Baumann, Neukirch.	do	22.5				Locomotive.
Forchbahn (Zurich [Tiefenbr.]-Bubikon).	Komitee (J. Baumgartner), Egg.	do	26.35				Do.
Montreux-Montbovon	Gebr. Dufour, aux Avants, Montreux, u. Kons.	Apr. 16, 1898	21.78				Electric.

[illegible]

* 1 kilometer = 0.62137 mile.

† In process of construction.

‡ Opened.

OBTAINING RAILWAY CONCESSIONS.

The cheap and simple method of obtaining concessions is, no doubt, responsible for the great number of projects, which may be kept alive for quite a length of time to prevent the construction of other lines and then traded off as seems most advantageous. The time for which a concession is granted is for eighty years. No deposit is required for the fulfillment of a project that has been conceded. Renewals may be granted at a stated time, if proper reason for the same can be given. The federal railway laws apply also to tramways or street-car lines.

As a rule, the average time allowed in which to submit for approval to the Federal Council plans of a road for which a concession has been granted is eighteen months. Six months later the building of the road must commence, and this should be finished during the following eighteen months; so in all, about three and a half years are given for the completion of a road from the time that the concession is granted.

The first step to be taken, if a tramway is projected, is to apply to the cantonal authorities for permission to have the use of their streets. This is done by petition. After receipt of the permission of the cantonal authorities, another petition is drawn up to be presented to the federal authorities. A printed formula suffices, and this is provided by the Government, and is the same for electric, steam, or any other railway. Annexed to this formula are printed extracts and rules from the federal laws of December 23, 1872, and February 1, 1875, of which I mention the most essential:

The Federal Council can deny a concession if the same should be against the military interests of the Confederation.

The Federal Council has the right to grant a concession even against the protest of a Canton.

In concessions, no discrimination or exclusive rights not to be shared by others can be granted, and no restrictions against the building of future railroads.

Rules and regulations of corporations can not be altered, except by permission of the Federal Council.

The federal decree reads:

The Council of the Swiss Confederation, after due investigation

First. Of a petition of ———,

Second. Of a message of the Federal Council dated ———, decrees, To give ———, who are about to form a corporation, a concession for the building of and operating of a (railroad or tramway) from ——— to ——— under the following conditions:

All the federal laws and regulations pertaining to the building and operating of Swiss railroads shall be strictly adhered to,

The concession is granted from the date of promulgation, and is good for eighty years.

The headquarters of the corporation is in ———.

The majority of the board of directors shall consist of Swiss citizens, who must have their domicile in Switzerland.

The following must also be presented:

(1) A perspective plan upon the federal atlas, the scale to be 1:100,000, where the projected line will be exactly shown in red lines.

(2) A situation plan; scale, 1:50,000.

(3) A profile plan; scale, 1:50,000; all scales to be in meters (metric system to be exclusively used).

(4) A statement of approximate cost per kilometer.

(5) A general technical statement regarding the building of the road.

(6) Statements as to deviations from the concessions, should occasion demand any.

(7) Two hundred extra perspective plans for the use of the members of the Federal Council.

(8) Twenty copies of the printed by-laws, as accepted by the corporation and certified by the Federal Council.

The Federal Council reserves the right to alter plans even after the acceptance of same, if the safety of the road is in question. All articles having a scientific value, such as medals, moneys, petrified objects, etc., if found in the earth during the building of the road, must be turned over to the cantonal authorities without charge. A federal inspector is detailed to watch the building of the road, and has at all times the right to enter the premises. At least two trains each way have to be run daily. It is requested that the American system of cars be used (in contradistinction to the French system).

The rates of fare for a single ride have to be: First class, 10 centimes; second class, 7 centimes; and third class, 5 centimes per kilometer (1.93 cents, 1.35 cents, and 0.965 cent per 0.621374 mile).

When the receipts show a profit of over 6 per cent annually for three successive years, the maximum fare has to be reduced. Should the receipts not cover expenses, inclusive of the interest on the shares, the Federal Council has the power to order an increase in the rate of fare. The corporation is compelled to open a reserve and repair fund; also to have its employees insured against sickness and accident. Further, under the law of July 1, 1875, regarding responsibility toward travelers, the corporation is compelled to insure all of its travelers. At least every third Sunday is to be allowed the employees as a holiday.

No concession can be made to third parties without the consent of the Federal Council. The federal laws as to obligations and rights of way are applicable to all concessions.

After completion of the railroad, the corporation must file with the Federal Council a full statement as to the cost of same; and any further addition of rolling stock, etc., must be described in supplementary statements. The Federal Council reserves the right to apply the following tax to railroads: Fifty francs (\$9.65) per annum, provided the net receipts are 4 per cent of the capital; 100 francs (\$19.30) per annum, provided the receipts should be between 5 and 6 per cent; and 200 francs (\$38.60), provided the net receipts should be over 6 per cent. These taxes are collected for every kilometer operated.

GOVERNMENT PURCHASE.

After May 1, 1915, the cantonal or federal authorities have the right to purchase any road in existence, provided three years' notice is given. If an agreement to purchase be entered upon and concluded up to May 1, 1930, twenty-five times the value of the net earnings for the ten years previous has to be paid; between the years 1930 and 1945, twenty-two and one-half times the net value; between the years 1945 and the end of the concession, twenty times the net value is to be the sale price. In case the Canton is the buyer, and the federal authorities demand control of the property, the Canton is compelled to deliver to the federal authorities the property acquired at the price paid.

The attitude of the Swiss Government is very favorable towards the building of railroads, especially mountain roads, and also electrical conveyances to places which otherwise would be difficult of access by the summer tourist.

All things considered, the investment of American capital in small mountain roads and electric tramways must be a paying one. Firms interested in this line should send competent men to look over the field of the concessions held. No doubt, profitable arrangements can be made either for the building of roads or for giving financial support to some of them. There is no lack of brains in Switzerland to conceive profitable projects in this line, but there is a lack of means to carry them out. The exceptional conservatism of the people may be another reason why meritorious projects have not been carried out.

ADOLPH L. FRANKENTHAL,

BERNE, *May 4, 1899.*

Consul.

BELGIAN TRADE WITH THE UNITED STATES IN 1899.

I submit the following table of imports from the United States into Belgium, comparing the first four months of the years 1899, 1898, and 1897.

Imports from United States into Belgium.

Articles.	First four months of—		
	1899.	1898.	1897.
Barley pounds...	4,297,956	71,571,722	69,351,585
Bran do.....	4,916,652	5,902,089	14,374,366
Buckwheat do.....	4,724,554	3,243,627	6,762,500
Indian corn.....do.....	146,540,930	163,644,775	147,902,758
Rye.....do.....	7,654,204	38,890,386	16,817,594
Oats do.....	144,804	3,746,644	13,643,637
Wheat, spelt, and mealin do.....	323,562,951	179,057,104	71,303,589
Forage do.....	2,831,778	2,839,235	3,309,997
Flour:			
Wheat do.....	2,286,381	1,564,287	546,566
Barley, oats, corn, and buckwheat.....do.....	220,618	282,982	596,062
Unclassified do.....	17,708		
Starch and nonalimentary fecula.....do.....	2,869,463	2,911,692	800,507
Coffee do.....	373,402	347,837	469,559
Cotton do.....	19,383,050	38,191,272	20,864,841
Hops do.....	61,846		26
Malt do.....	683,498	872,551	443,859
Raw animal substances, such as lard.....do.....	6,987,567	10,166,914	5,276,334
Animal fat, not specified, fish oil.....do.....	4,252,664	1,452,699	1,010,388
Raw animal substances, horse hair, shells.....value...	\$45,354	\$30,870	\$58,728
Fruits:			
Prunes pounds...	143,177	405,712	163,365
Dried, unclassified.....value...	\$29,987	\$43,626	\$31,805
Honey pounds...	435,646	252,581	307,120
Wax do.....			225,766
Meats:			
Salted or smoked ham, tongue, etc.....do.....	8,718,734	14,915,933	11,742,802
Preserved.....do.....	226,251	364,019	221,963
Raw mineral matter, unclassified, grease.....do.....	302,102	757,129	441,543
Petroleum, refined.....do.....	69,069,877	85,216,130	89,230,570
Rushes, bamboo, etc.....value...	\$114,635	\$5,941	\$2,904
Stones, unclassified.....pounds...	10,541,752	32,299,058	45,397,997
Tar, asphalt, etc.....do.....	17,169,788	27,674,682	22,195,801
Copper and nickel:			
Unworked pounds...	1,002,517	5,477,198	4,114,120
Worked.....do.....	37,308	55,141	143,911
Iron:			
Cast do.....	8,586,678	5,525,532	6,386,463
Wrought do.....	185,598	149,573	
Old do.....	21,605	287,376	34,171
Not specified.....do.....	40,264	22,680	7,376
Lead.....do.....	1,499,613	1,588,793	701
Steel in bars, sheets, wire, unspecified.....do.....	162,412	98,093	4,089
Tools, machines of iron or steel, unclassified.....do.....	104,449	56,067	58,975
Machines and machinery:			
Unclassified do.....	8,170	30,655	143,934
In cast iron, unclassified.....do.....	1,119,400	736,312	1,102,399

Imports from United States into Belgium—Continued.

Articles.	First four months of—		
	1899.	1898.	1897.
Bicycles and bicycle parts.....value...	\$16,755	\$26,279	\$36,592
Firearms do.....	\$1,754	\$2,235	\$1,411
Hemp pounds...	1,478,320	215,984	490,901
Cordage do.....	44,907	41,166	441
India rubber, manufactured.....value...	\$1,713	\$1,227	\$812
Hides, raw.....pounds...	44,120	185,752	72,189
Leather, tanned.....do.....	33,384	20,672	18,871
Furniture value...	\$5,764	\$6,176	\$1,016
Haberdashery and hardware:			
15 per cent duty.....do.....	\$9,084	\$6,636	\$4,281
10 per cent duty.....do.....	\$395	\$275	\$504
Paper, not specified.....pounds...	273,901	299,263	6,199
Chemical products, unspecified, such as carbolic-acid gas, etc.....value...	\$294,110	\$169,880	\$388,440
Dyes and colors, not specified.....pounds...	705,258	372,209	309,032
Drugs, unclassified, plants, roots, flowers, etc.....do.....	9,267,665	12,541,779	9,550,708
Drugs, glue.....do.....	1,984	65,414	2,480
Tobacco:			
Unmanufactured do.....	3,628,875	3,481,823	3,491,562
Smoking and snuff.....do.....	4,477	6,953	3,536
Cigars and cigarettes.....do.....	6,770	2,810	5,088
Vegetable oils, nonalimentary.....do.....	10,973,467	6,919,539	4,555,792
Vegetables and vegetable substances, unspecified...do.....	1,923,048	898,154	609,461
Grains do.....	363,688	541,638	551,438
Oil cakes do.....	51,681,203	43,751,528	53,190,871
Wood:			
Oak and walnut—			
Unsaawn cubic meters...	165	404	831
Split do.....	741	108	177
Sawn do.....	4,520	6,020	6,001
For building purposes, other than oak and walnut—			
Unsaawn cubic meters...	752	461	945
Sawn, beams, etc.....do.....	1,750	2,584	286
Sawn do.....	18,081	20,789	12,817
Wrought value...	\$2,857	\$4,563	\$2,927
Wood pulp.....pounds...	2,145,046	782,092	348,798
Horses number...	1,418	2,060	1,142
Wool.....pounds...	76,228	2,142	27,251
Raw mineral matter, unclassified, such as mineral copper, lead, zinc, etc.....value...	\$64,452	\$46,228	\$55,930
Works of art.....do.....	\$147	\$20,382	\$212

GEO. F. LINCOLN,
Consul-General.

ANTWERP, May 19, 1899.

WATERWORKS IN RUSSIAN CITIES.

I transmit herewith translation of the specifications for the proposed waterworks for the city of Nicolaiev, Russia. I have in my possession two maps showing elevations, streets, localities, etc., which I shall be glad to send to the Department if it is thought advisable.

My object in sending the details as given in the inclosed translation is to bring to the notice of American firms the entire project, so that they can bid on the entire contract or can arrange to supply water pipe, pumps, and other machinery. Bids will be received within the next six months.

The city of Odessa is at present engaged in extending its water supply. I mentioned in my last annual report * that an American firm had secured a large order for water pipes, and stated that in my opinion American firms would eventually secure another large order, as I did not believe Russian manufacturers would be able to keep up to their contract with the city to furnish a large quantity of pipe. My opinion was correct; the contract with the Russian firm was recently canceled upon payment of a large sum of money to the city, and the town authorities are now in communication with American firms asking them to furnish the pipe required. A curious incident in connection with this contract for water pipes for Odessa was the action of the French Government through its ambassador at St. Petersburg. The ambassador asked to have the contract taken from the American firm and given to a French firm, on the ground that the close relationship existing between Russia and France entitled them to favors of this kind. The Russian Foreign Office took the matter up, and the governor of Odessa was instructed to investigate and see what could be done. The governor was obliged to report that the town refused to change their arrangements, being quite satisfied with their contract with the Americans, whose pipe was in many respects better than that of their competitors, and also cheaper. It was pointed out that the specifications called for water pipes of a certain kind and quality and of a defined shape. The French did not have pipes of this shape, nor could they make them. The ambassador requested that the specifications be altered to suit the French pipe; but the town declined, for the reason that the best engineering skill favored the shape required by the specifications, which was the shape used by the Americans.

THOS. E. HEENAN,
Consul.

ODESSA, *April 29, 1899.*

WATERWORKS FOR THE CITY OF NICOLAIEV, RUSSIA.

The municipal council of Nicolaiev, in the province of Cherson, invites responsible parties in Russia or abroad to undertake the construction of waterworks in the city of Nicolaiev, on the following conditions:

(1) The water for the works must be taken from the water-bearing stratum lying at a depth of from 10 to 15 fathoms. The water-collecting galleries and the water-collecting basin must be constructed either in the southwestern part of the penin-

* See *Commercial Relations*, 1898, Vol. II, p. 538.

sula adjoining the town, near the railway station, or in the locality called "Levada" (marked on the plan of the city). The selection of the locality will be made by means of driving bore holes and testing the quality and quantity of the water. The decision of the question as to which of the places indicated must be chosen for the construction of the water-collecting galleries rests with the municipal administration.

(2) The dimensions of the galleries will be fixed with the stipulation that the city be supplied with 600,000 vedros * (1,949,400 gallons) of water per diem during eighteen working hours.

(3) The water-pipe system in the streets is contemplated to measure about 94 versts (329,000 feet), not reckoning the lengths of the pipes leading into the court-yards, the construction of which will form the subject of special agreement.

(4) The municipal council imposes on the successful bidder the duty of constructing the waterworks complete, including excavation, erection of the buildings, laying of pipe, etc.

(5) The parties making proposals must place before the municipal council a sketch, on which must be marked the entire water-pipe network, the situation of the water-distributing and fire cocks, the water-pressure towers, the machine stations, the water-collecting galleries and water-collecting basin.

(6) The sketch must be accompanied by an explanatory statement and an estimate.

Details of the project.

(1) The place for the water-pressure tower is selected so as to insure a minimum expenditure on the construction of the water-receiving network and the tower. The height of the tower must be calculated so that from each fire cock, distant 50 sagues (about 350 feet) from a house, the water, through a 3-inch hose, shall rise to an elevation of 10 sagues (70 feet) and discharge itself to the quantity of 20 vedros (nearly 65 gallons) per minute.

(2) The station must be erected near the water-collecting basin and must consist of a solid stone building, accommodating two engines, boilers, repair workshop, stores for fuel, lubricants, and the requisite reserve parts. In the general building, or near the same, must be constructed a dwelling for the engineer and his assistant, two firemen, and the watchman. Near these dwellings must be constructed cemented and perfectly tight refuse pits and sewers.

(3) The steam engine must be of the newest system, compound, with condensers with steam envelopes, with the latest distribution connections, and with automatic greasers. The consumption of steam must not exceed 8 kilograms (17.6 pounds) per indicated horsepower per hour.

(4) The pumps must be of the best system. Direct connection of the machines with the suckers is permissible.

(5) The boilers must have water tubes of the system of "Babcox and Wilcox," supplied with improved appliances.

(6) The steam conduit must be tested with double the working pressure. All connections must be effected on lentil rings, and all steam pipes must be isolated against cooling.

(7) The water-reception and the water-pressure network must consist of cast-iron tubes, tested with 20 atmospheres pressure, and asphalted within and without.

(8) The water receptacle must contain no less than 60,000 vedros (194,940 gallons).

* Consul Heenan estimates the vedro at 3.249 gallons. In the official table of weights and measures introductory to CONSULAR REPORTS, and in all preceding reports from our consuls in Russia, the vedro is and has been given as equivalent to 2.707 gallons.

(9) In places of the city to be indicated by the municipal council, there must be constructed fountains with cemented basins up to 5 sagenes (35 feet) diameter.

(10) In the Odessa quarter and the Moscow quarter of the city, the distributing network must have T pieces inserted, so that without the least disturbance of the conduit, water may be turned on in every house. In various parts of the town, there must be constructed ten troughs for watering cattle and as many as twenty drinking stands.

(11) All fire plugs must be fitted with nonfreezing cocks and with uniform branches for screwing on the hose.

(12) The workshop at the station must be supplied with turners' lathes for cutting screws, a cross planing and boring stand, three pairs of locksmiths' vises fixed to the worktable, a blacksmiths' furnace, two fires with a ventilator blast, an anvil, a portable furnace, a differential block for 1 ton, a wooden screw jack, and a full set of blacksmiths' and locksmiths' tools.

(13) The water-pressure tower must be joined to the station with an electric automatic appliance, to indicate the level of the water in the reservoir.

(14) The network, in all its parts, must be fitted with branches for the insertion of control manometers, for the purpose of testing the pressure.

Besides the above points, each bidder must keep in view:

(1) After the presentation of his plan, together with the explanatory statement and the estimate of cost, and after an agreement has been made with the municipal council regarding the price of the construction, terms, time, and other conditions, the bidder must present a fully worked-out project with detailed drawings, calculations, and estimate. Such fully defined project, after its confirmation by the municipal council, is printed, and 100 printed copies of the project, with the corresponding drawings, are handed over as the property of the municipal council.

(2) The commercial administration of the city may, if it desires, effect a settlement with the contractor for the construction of the waterworks in bonds of the town loan, at a rate of exchange previously fixed, or it may authorize the contractor to realize the loan with a fixed minimum.

(3) After the construction of the waterworks, the contractor must undertake, for a fixed annual rate, to manage the entire water supply of the city up to a term of three years, taking upon himself all expense for administration and repairs and pecuniary responsibility for all eventualities which may result from an insufficient supply of water for the population.

(4) The final acceptance of the bid and the full settlement with the contractor will be effected after a test of the entire construction under the management of the contractor; and the contractor is obliged to obviate all defects and to replace badly working mechanism and appliances.

Remark.—Any differences of opinion on this subject are to be decided by a commission composed of a representative of the city, a representative of the contractor, and a representative of the administrative authorities. All these persons must possess the highest technical education, and will decide by a majority vote, and such decision will be considered as final.

(5) The communal administration of the city will accept such tenders from contractors as comply with the requirements of the specifications within six months.

V. A. DATSENKO,

Mayor.

TRADE IN PRAGUE.

The export from this district for the quarter ended March 31, 1898, slightly exceeded the export for the same quarter in the year 1899, the total values being \$352,535 and \$331,027.85, respectively. The imports into this district are not ascertainable, no statistics being kept here. Trade conditions are better than a year ago, a number of enterprises having been projected which will give employment to many more laborers and offer opportunities to American manufacturers of machinery and electrical appliances to introduce their articles.

This market has evidently been entirely overlooked by American exporters. Our manufacturers who have entered the European market have generally established agencies in London, Paris, and Berlin, and some few at Vienna. During the last few years there has existed in Bohemia, the greatest producing state in Austria, a bitter strife between the Czechic and German nationalities, which has resulted in a movement to boycott as much as possible the German tradesmen and manufacturers. As nearly all public enterprises and a great many private ones are under the control of the Czechs, it can readily be seen that German houses can not efficiently promote American exports to this market. Our exporters should establish a sample warehouse here, or at least open an agency.

There is at present a great demand for electrical supplies in this district, a number of electric-car lines having been projected. Agents from the United States should be sent here.

Slate is another article for which there is a market. It is produced in Bohemia in very small quantities and in two colors only—blue and green. It is used for roofing purposes, but the production does not nearly supply the demand. The slate used is in the form of rectangles and hexagons, the sizes being from 12 by 6 to 21 by 11 inches, and so far the demand has been principally supplied from England, some also coming from France, Germany, and Switzerland. The last two countries send school slates as well. The first four carloads of American slate were brought here a few days ago through the firm of Josef Umlanft & Co., in Bodenbach, Bohemia. So far as this market is concerned, our exporters have shown a certain apathy, possibly the result of the immense development of our exports during the last two years. This very extension of our trade will cause increased activity on the part of foreign manufacturers, and our exporters should cover every field possible and establish themselves firmly. It is conceded on all sides

that American articles are superior to others of like kind; and, once the people in foreign countries are accustomed to use them, it will not be easy to introduce other goods, even though these may be a trifle cheaper.

It is well known that the wages paid in Bohemia are very small, especially in the linen factories and some of the branches of the glass industry. Labor unions are being formed, which have demanded an increase in pay. A recent strike at Nachod on the part of the linen weavers resulted in a riot, in which business houses were plundered. It was finally quelled by the military.

HUGO DONZELMANN,

PRAGUE, *April 14, 1899.*

Consul.

FOREIGN AND HOME CONSUMPTION OF GERMAN BEER.

The German beer industry has grown year by year, and the increasing capacity of the establishments has made it necessary for the brewers to search for new markets where their overproduction could be disposed of. The home consumption, of course, is depended on as giving the first and greatest chance to sell the different kinds of beer, but the larger brewers, especially those who increased the capacity of their establishments more or less after the style of the big American breweries, have had to find customers in foreign countries. Their efforts for some time met with good results, and Germany's beer industry had an export market for its products which seemed to be all that could be expected.

In the year 1885, the export of German beer reached its high-water mark, amounting in that year to 1,318,000 hectoliters (34,821,560 gallons), representing a value of 24,000,000 marks (\$5,712,000). The next year, however, showed a decrease, and since then the export has gone down to about one-half of what it was in 1885. The reason given for this decline is that the countries which were Germany's best customers (France, Belgium, and the Netherlands) have increased their output sufficiently to nearly meet the home demand. The high duty placed on foreign beers by France has also had the effect of considerably reducing the import of German beers into that country.

In all those years, the export of German beer in bulk (barrels) has been greater, contrary to general belief, than in bottles.

German beer once had nearly a monopoly of the beer trade of South America; but there also, it is stated, the demand has decreased,

while at the same time, according to trade papers, the demand for United States beer has increased. The decline of the German beer trade in Brazil alone during the years 1896 and 1897 is given as amounting to fully three-fourths of what the German brewers had exported to that country in former years.

It is a noticeable fact that, while the export has declined year by year, the production of beer in Germany has advanced steadily, showing that the home consumption has greatly increased. At present, the United States is the best foreign customer for German beer, importing 522,138 gallons in 1895 and 689,456 gallons in 1896. The export of beer from Germany to Venezuela, Japan, and China together did not in the years given amount to one-half the exports to the United States alone. Brazil and British India, as consumers of German beer, come next to the United States.

The German brewing industry has strong hopes of entirely supplanting the English in Australia and other English colonies.

MAX J. BAEHR,
Consul.

KEHL, *May 17, 1899.*

GERMAN INDUSTRIAL ADVANCE.

The German iron, machine, coal, and chemical industries are scarcely able to meet the demands made upon them. The prices quoted for shares of the more important of the textile factories show that this branch is also slowly growing again, after having suffered for a long time, chiefly from American competition. The development of the German copper trade is connected with the exceedingly favorable condition of the electric industry; the caoutchouc industry is also connected with the latter, and with the large output of cycles.

Great activity prevails in nearly every branch of manufacture. The inland market is unusually absorptive, and efforts are being made to recover in new territories what has been lost by some of the branches in the export trade—the textile industry, for instance.

Special reference should be made to the great activity of some of the German consuls. About a year ago, the well-known German commercial writer Dr. von Vossberg-Reckow stated in his essay on "Consular reform" that the Government of the United States could point with pride to the most efficient consular service, and that our way of gathering interesting news and giving information should be followed in Germany. Though a consular reform, properly speaking, has not been brought about in Germany yet, the hints thrown out by Dr. von Vossberg-Reckow, and by some of the chambers of

commerce within the last few years, have had a very salutary influence upon the activity of the German consular officers. In consequence of consular hints to German manufacturers, a strong effort is being made to enlarge the trade in German leather and shoe ware in the Japanese market. Interested parties in the United States should promptly take notice of this, for these are the very articles in which American exportation to Japan has been steadily growing. So far, the German export of leather ware to Japan has, on the whole, been confined to the better class of goods, as manufactured at Berlin and Offenbach.

Here are the latest statistics of German exports of manufactures:

Articles.	1897.	1898.	First quarter of 1898.	First quarter of 1899.
Iron and iron goods.....	\$78,000,000	\$86,500,000	\$21,100,000	\$23,400,000
Machinery, tools, etc.....	44,500,000	47,500,000	11,100,000	13,000,000
Coal	41,500,000	44,800,000	11,500,000	11,700,000
Colors, drugs, etc.....	76,200,000	84,700,000	19,400,000	20,100,000
Cotton goods.....	54,700,000	55,500,000	14,800,000	15,800,000
Wool and woolen goods.....	77,700,000	72,900,000	18,400,000	18,100,000
Silk goods.....	32,500,000	36,500,000	9,000,000	9,200,000
Copper and copper goods.....	20,400,000	22,700,000	5,300,000	6,000,000
Caoutchouc goods.....	8,800,000	8,900,000	3,400,000	3,800,000
Glass and glassware.....	10,400,000	9,300,000	2,100,000	2,300,000
Leather and leather goods.....	34,400,000	36,400,000	8,400,000	9,500,000

LOUIS STERN,
Commercial Agent.

BAMBERG, *May 12, 1899.*

CONSUMPTION OF BEET SUGAR IN GERMANY.

It seems to be generally admitted that German beet sugar, when once it comes into competition with the Cuban product, must go to the wall. In casting about for some way of saving the industry from utter destruction, many plans have been proposed, but the most available seems to be to "increase home consumption." To this end, it is proposed to issue sugar as a ration to the soldiers and to encourage farmers to feed it to stock, especially to hogs. Of course, this will necessitate the cheapening of the article, and the only way this can be effectually accomplished is to abolish the taxes now paid on sugar consumed in Germany, and reduce or entirely discontinue sugar bounties.

The following statistics of the consumption of sugar in Europe and America, taken from the last monthly report of Herr Licht, statistician of the beet-sugar industry of the German Empire, show

conclusively that there is ample room for a large increase of its use in Germany:

Country.	Population.	Sugar used per capita per annum.
		<i>Pounds.</i>
England.....	39,972,000	91.31
Switzerland.....	2,990,000	52.11
Denmark.....	2,340,000	48.83
Sweden and Norway.....	7,031,000	40.74
Holland.....	4,038,000	34.41
France.....	38,539,000	31.02
Germany.....	54,168,000	30.22
Belgium.....	6,495,000	23.08
Austria.....	45,391,000	17.84
Portugal.....	5,105,000	14.24
Russia.....	106,250,000	12.61
Spain.....	17,913,000	8.09
Roumania.....	5,505,000	7.21
Turkey.....	24,082,000	7.08
Italy.....	31,300,000	6.28
Greece.....	2,433,000	6.24
Bulgaria.....	3,312,000	5.53
Servia.....	2,345,000	4.72
All Europe.....	400,109,000	25.42
United States.....	72,807,000	59.30

W. K. ANDERSON,
Consul.

HANOVER, *April 24, 1899.*

AMERICAN SHOES IN GERMANY.

The efforts made by Mr. Mason * and other consuls to get American manufacturers of shoes to introduce their wares into this Empire are bearing fruit. They are, however, as was to be expected, meeting with opposition. How true this is will appear from the following translation of an article concerning the importation of shoes from the United States:

According to official publications in America, it appears that the exports of American shoes to Germany are increasing. * * * The letters of two German business men handling such shoes prove how little German firms care to protect German shoemakers. It looks as if an understanding among interested parties should be arrived at before Germany is flooded with American shoes. It is recommended that shoemakers' guilds in the large cities make manufacturers and people aware of the efforts to introduce American shoes into the Empire, and point out the losses to the shoe industry and to the buying public that must grow out of such sales. It would not only be a useful thing to specify the bad qualities of

* Reports on openings for United States shoes in Germany by Consul-General Mason have appeared in CONSULAR REPORTS No. 190 (July, 1896), p. 508; No. 194 (November, 1896), p. 450; No. 205 (October, 1897), p. 251; No. 211 (April, 1898), p. 490; No. 212 (May, 1898), p. 133; and No. 215 (August, 1898), p. 609.

American shoes in the technical daily papers, but to advise the local unions, the manufacturers, merchants, etc., to procure samples of American shoes, show the quality of same by separating the leather from the paper, and examine the soles sewed on in long stitches with binder's twine. The results should then be published in the papers and put before customers. According to the opinion of Germans living in America, the durability of American shoes is at best no more than one-fourth or one-third that of Germany's well-made ones. But the elegance of American shoes, even the low-priced grades (*Schleudersorten*)—and these, because of their cheapness, are the only ones worth considering in Germany—make them favorites with loafers. The working people are not satisfied with them. German-American shoe merchants in Washington admit that American shoes are of much poorer quality than the German; but their finish and apparent fineness make business lively.

If a word were wanted to prove the oft-repeated statements of consuls that Germans will endeavor to "knock out" any goods that we may send here just as soon as these begin to secure success, it is spoken in the above extract. This epitomises what has appeared day after day in the Empire's public press ever since propaganda for American shoes began. It goes to show what our merchants and manufacturers will have to contend with in their work to make sales in Saxony or any other part of Germany.

What are the facts? Hundreds of Germans who visit the United States "load up" with American shoes before they return. A shoe-maker in this city, to whom a pair of American shoes was given to be mended, took them apart to study the workmanship, made a last from them, and is now using them as a model. One of my acquaintances, seeing the superior workmanship, elegance, etc., of some shoes sent me from the other side, ordered fourteen pairs for himself, family, and friends. Between American shoes and those made in this Empire there is actually no comparison. One pair of ours will outwear two pairs of German make; at least, that has been my experience. Every effort is being made to make our shoes unpopular in this market. Some of these efforts—the foregoing article, for instance—seem unfair. Our shoes are notoriously the best offered anywhere for the price. I have seen shoes bought in Boston for \$3 (12.60 marks) a pair outlast—keeping an elegant appearance all the time—two pairs bought here for 22 marks (\$5.24) a pair.

I bought for my boy the other day a pair of brown or tan leather shoes of German make. The little fellow walked in them from the kindergarten home, less than a quarter of a mile, in a shower; when he got home his feet were wet, because the water had gone through sole and upper. When I remonstrated with the merchant for selling me such shoes, he said, "They were intended only for fair weather."

If imitation is the sincerest flattery, American shoe manufacturers should be satisfied, for their forms, styles, etc., are being imitated here; how successfully, I can not say. Goodyear's welt is

advertised in a great many shoe windows. Shoes like the Emerson, Douglas, Regal, etc., should sell in every city of this Empire.

There is a good market here for American shoes. Just how it should be worked must be left to merchants themselves. All that consuls can do is to point out the possibilities of creating one. If every city of the Empire had one or more stores offering good, solid, sensible American shoes at practically the same prices for which they are sold at home, I am sure thousands would sell where now only dozens are sold. Nor is the exploitation of this market the only thing to be considered. If our manufacturers can sell here, they can sell in markets hitherto held by the Germans. The great gain is not a market here, for, after all, so successfully do Germans imitate that this market can not be held long against the efforts that will be made to dislodge us. The advantage will be in winning markets in South America, the East, South Africa, and Australia, and in maintaining a practical monopoly of the market at home.

Care must be taken to send only the very best goods that can be sold at the prices that prevail here. These run from 75 cents to \$6 for good shoes. In no country on earth is so much done to induce people to patronize home products as in this Empire; but commerce in shoes, as in all things else, is outside of patriotism, and articles like the one quoted will be powerless against any well-formed and well-conducted effort to give better shoes for less money to the German people than they now receive. The thing to do, it seems to me, is for American manufacturers to pool their issues, and send experts to examine this market. Another excellent idea would be to exhibit at Paris next year as extensively as possible. It may not be out of place to say that there is a field here for certain American leathers—sole leathers in particular. Nothing in the sole line made in this country, as far as I can see, is as tough and durable as ours.

J. C. MONAGHAN,

CHEMNITZ, *April 29, 1899.*

Consul.

SHOE TRADE IN FRANCE.

The following reports have been received from consular officers in France, in reply to inquiries by a Massachusetts board of trade:*

HAVRE.

Consul Thackara writes, under date of April 27, 1899:

The shoe manufacturers of the United States are undoubtedly enjoying the benefits of the great prosperity which is now reigning throughout our country; and many of the factories, at the present

*Advance Sheets have been sent the board.

time, are probably working to their utmost capacity in filling their orders. But, from the articles which have appeared in the boot and shoe journals and from the testimony of several of the leading manufacturers, the output of American shoes has caught up with the annual home consumption, so that in nine months enough boots and shoes can be made to supply all the home demands. During the remaining three months, in order to keep the establishments running, surplus stocks must accumulate, which will have either to be thrown on the market at a ruinous price or outlets abroad must be found.

It appears to me that if our shoe manufacturers would send representatives to Europe who could speak French or German, or both, to study the economic conditions of the countries, to consult with the leading shoe dealers, to see for themselves what the consumer wants, the shapes most in vogue, and the character of the articles with which they would have to compete, they would undoubtedly be able to make business connections which would be the means of allowing them to dispose of the surplus products mentioned.

The great drawback to the introduction of American factory-made shoes will undoubtedly be the price; for they most certainly are better made and handsomer in appearance than those sold in France. If trade is established, manufacturers must be careful to fill their orders promptly and honestly; they must not send shoes with paper-filled soles, pasted joints, or which are imperfectly sewed; for these will only act as boomerangs. Our manufacturers must understand that the French are a people of taste and know what they want, and that anything that is not good enough for America will most assuredly not be received here. To give good material and honest workmanship must be the rule.

Comparatively few American factory-made shoes are imported into France, owing principally to the price. In Paris, they can be bought at the Bon Marché, the Louvre, the American Shoe Store, and the Maison Raoul and Bauer. But they are seldom on sale throughout the provinces. If an American shoe were made to suit the wants and desires of the people, it would certainly meet with a ready market, provided it could be sold as low as the domestic article. I have not been able to discover any prejudice against American-made shoes among the dealers of Havre. On the contrary, if the prices were low enough and the shoes were made to suit French tastes, they would soon be offered for sale.

Of the shoes which are imported into this country, the greater portion comes from Belgium and Austria. There are, however, large quantities of shoes made in France. The shoe factories are spread over the entire country, the principal centers being at Paris, Nancy,

Fougères, Limoges, and Leancourt. According to the official custom-house statistics, there were imported into France, for consumption, 121,996 pairs of shoes in 1896, 121,224 pairs in 1897, and 133,100 pairs in 1898, at an average price in 1898 of 7 francs (\$1.35) per pair. As to exportations, it will be seen from the following table that France sends many shoes to foreign countries and to her colonies.

Exportation of shoes from France.

Country.	1898.	1897.	1896.
	<i>Pairs.</i>	<i>Pairs.</i>	<i>Pairs.</i>
England.....	174,900	161,809	213,405
Belgium.....	100,700	97,187	137,513
Switzerland.....	105,000	93,713	63,224
Brazil.....	54,000	42,286	84,105
West Indies.....	200		1,100
Algeria.....	566,400	581,565	677,925
Other countries.....	518,700	696,974	787,683
Total.....	1,519,900	1,673,534	1,964,955

The above exportations include shoes either made in France or those imported upon which duty has been paid. The custom-house valuation of the shoes exported averages 11.70 francs (\$2.26) per pair.

The prices of ready-made shoes on sale in this city—that is to say, the retail prices—vary from as low as \$1 per pair up to \$4 per pair. The shoe which probably sells best is one at about \$1.75 per pair retail. The demand for the higher priced ready-made shoes here, as in America, is gradually increasing. Many of those who formerly had their shoes made to order at high prices are now, for economical and other reasons, buying the ready-made article. The shoes at \$1.75 per pair are machine-made calfskin articles, neat in appearance, with a peculiar square box toe, the style now greatly in vogue.

A letter which I have received from a well-known importer of American shoe machinery in Paris says:

Most of the best kinds of French foot wear for men are sold wholesale at prices ranging from \$2.12 to \$2.70 per pair, and it is not possible to import a first-class American boot or shoe to compete at that price, although American-made shoes look better, and some of our customers copy the American styles.

He says that it costs 3 francs (58 cents) per pair to import an American shoe. In order that our manufacturers may judge whether or not his assertion in regard to the possibility of importing American shoes into France is accurate, I shall give a few figures and let them make their own deductions.

The present duty upon shoes imported into France from America is 2.50 francs per pair, or 48¼ cents. According to a statement of

an official of La Compagnie Générale Transatlantique, by the new freight line which this company is about to inaugurate—the first steamer leaving here May 9 next—the rate of freight from New York to Havre will be greatly reduced; it will probably be about 15 francs (\$2.89½) per ton of 1,000 kilograms (2,204 pounds). The cost per pair for freight and duty can thus be estimated. The French dealer will require a profit of not less than 30 per cent. Taking all these facts into consideration, it appears to me that we would not be in a position to compete with the cheaper grades of shoes sold on this market, but we could possibly establish a trade in the better kinds. I can not but repeat the advice given above, that it would be a wise plan for our shoe manufacturers to send a representative abroad, in order to see for himself the trade conditions of the different large shoe centers in this and other European countries.

I am not able to give a detailed description of the best-selling shoe in this market which would convey a correct idea of how the shoe is made, the kind of leather used, the style and shape, etc. But I am quite willing to purchase a pair of shoes which, in my judgment, would be a fair sample of the line of goods with which our manufacturers would have to compete and submit it to them.

In reply to the last question, "Would it, in your opinion, conduce to the prosperity of our city and its industry to have its manual translated into the language of your country?" I would say that a manual, to be of real service, should be printed in the language of the country to which it is to be sent. I am constantly in receipt of catalogues, reports, etc., printed in English. To me, and to a few of the merchants who speak our language, this literature may be interesting; but it is incomprehensible to those unfamiliar with the English tongue.

RHEIMS.

Consul Prickitt, on April 24, 1899, says:

In regard to your specialty—men's shoes—it seems to me it would require great effort to introduce them into this part of France. In the first place, there is a tariff of 50 cents per pair, and then the French are prejudiced in favor of their own productions and must be convinced that it will benefit them to purchase a foreign article. This will require object lessons, and the only way in which these could be given would be to have salesmen, speaking this language, visit the merchants, exhibit samples, convince the dealers that it would be to their interest to buy, and take orders on the spot. The best place to commence would be at Paris, for there are many English and Americans there, while here almost the entire population is French.

During the eight months ending February, 1899, the entire exports of boots and shoes from the United States to France were valued at about \$16,000. Any notable increase in this trade would be viewed with alarm, and would almost certainly lead to an increase in the tariff rate.

NICE.

Under date of May 12, 1899, Consul Van Buren writes:

I have not been able to find any men's shoes of American manufacture on sale in this city or in its neighborhood, and I have every reason for believing that none are sold at any point of the French or Italian rivieras. I am convinced, from my knowledge of the degree of excellence as to materials, workmanship, and shapes, that a good trade might be built up in men's shoes, and I am further convinced that merchants and dealers, once conversant with the advantages of the American articles, would receive them well.

A moderate number of men's shoes are brought here from Germany and Austria, and these are sold at retail at from 14 to 18 francs (\$2.70 to \$3.84) a pair. There are several Parisian manufacturers who send their goods here, and their shoes are sold at about the same price as the German and Austrian articles. The very common article made here for workingmen costs from 6 to 12 francs (\$1.16 to \$2.32), but it hardly deserves the name of shoe. As to the details of shoes sold here, they would cover everything in the shoe line as regards materials, shapes, and colors. Those made here come from the usual custom boot and shoe makers, from several bootmakers in the town who work in shops for the cheaper trade, and, as mentioned above, from Paris and abroad.

I do not know of any organized shoe manufactory anywhere in this vicinity, but there is a shop which furnishes custom shoemakers with uppers for high and low shoes of good quality at from 4 to 9 francs (77.2 cents to \$1.74) per pair, and for common qualities at from 2 to 5 francs (38.6 to 96.5 cents) per pair. Some years ago, a company was organized in Paris called "L'Incroyable" for the manufacture of various styles of men's shoes, which has opened shops in various towns of France, Nice included. This company sells its high and low shoes, buttoned or laced, in black, tan, or patent leathers, at a uniform price of 8.50 francs (\$1.64) per pair. I am informed that the company distributed a 10 per cent dividend on its shares last year. I have heard that these shoes, which would come the nearest to competing with American factory-made shoes, leave much to be desired as to material, shape, and durability. So far as the latter objection is concerned, it should be remembered that the climate

of this region is such that the wear and tear ought to be much less than in our own Northern States.

In conclusion, I would add that the French duties are 2.50 francs (48.3 cents) per pair for boots and high shoes and 1 franc (19.3 cents) per pair for low shoes. Shipments may be made direct from New York to Marseilles and thence to Nice by sea. Mr. F. Repossi, commission agent at rue d'Amérique and Place Washington, Nice, purposes giving all his attention to the building up of a direct trade, exclusively in articles of American manufacture.

SHOE TRADE IN COLOMBIA.*

There are ten shoe manufacturers in this city (Barranquilla), as follows:

Name of manufacturer.	Name of factory.	Weekly output.
		<i>Pairs.</i>
José Ma. Rosado.....	Sello Nacional.....	240
Anibal Perez R.....	El Faro.....	60
José Paternoster.....	.....	60
Manuel Vergara.....	La Elegancia.....	42
A. & B. Jandroep.....	.....	20
Joaquin Lascano.....	Chiquinquira.....	45
Julio Ramon.....	El Coturno.....	25
Franz Möller.....	Chicago.....	50
Froilan A. Ballesteros.....	.....	40
Alberto Navarro.....	La Campana.....	30
Total.....	.....	612

These factories employ 89 workmen, and turn out about 2,448 pairs of shoes a month. There are twenty-three foot-power sewing machines in use, on which the upper work is made, and a few hand machines for perforating and eyelet work. All other work is done by hand; no steam or other power is used.

MATERIALS.

Most of the sole leather is manufactured in this city. There are five tanneries; two of these turn out about 4,500 sides per month, in addition to some few goat and calf skins; the others do not run regularly, and the output is uncertain. The divi-divi berry and the bark of the mangrove tree are used for tanning purposes. These substances are ground and treated somewhat the same as the barks

* This report was made in answer to inquiries by a Massachusetts firm, to which Advance Sheets have been sent. The paper peso, valued by the consul at 29 cents, is used throughout this report. The nominal value of the Colombian peso is given by the United States Director of the Mint, April 1, 1899, as 43.4 cents.

used for tanning in the United States. The lime used is burned here.

Green hides weigh from 50 to 75 pounds and are sold at from 12 to 16 centavos (equal to from 3.48 to 4.64 cents in United States gold) per pound; dry-salted hides at 20 centavos (about 5.8 cents gold) per pound; and dry-salted arsenic-cured hides at from 31 to 32 centavos (from 8.9 to 9.2 cents gold) per pound.

The production of salt is a Government monopoly. Coarse salt is secured by the evaporation of sea water, and is sold at 3.20 pesos (92.8 cents gold) per 100 pounds.

By the processes employed here, three months are required to make leather. The tanning costs about 2 pesos (about 58 cents gold) per side. Divi-divi gives satisfactory results, but leaves the leather of a very light color. It is claimed that the mangrove bark, which is used principally to give the leather a red-brown color is somewhat injurious to the stock. I am told by one of the largest tanners that any tanning extract which will serve the same uses as the mangrove bark without damaging the leather will find sale among the leather manufacturers here and in other parts of Colombia. The upper leather is principally of goatskins; few calves are killed.

Price of the home product.

	Pesos.
Sole leather.....per pound...	0.80= \$0.232
Soles, cut..... per pair...	.40= .116
Upper leather:	
Goat.....per skin...	4.00= 1.16
Calf do.....	8.00= 2.32

One shoe manufacturer makes all leather, sole and upper, used in his factory. The most of the upper leather used in the other factories and all other materials are imported. I have carefully investigated the matter, and find that articles in use in these factories are imported as follows:

Upper leather—from France, Germany, Italy, and the United States.

Thread—principally from France; some from England, United States, and Italy.

Lasts—principally from France; some from United States, England, Germany, and Italy.

Sewing machines—all from the United States.

Tools and other small hand machines—mostly from the United States.

Elastic cloth—principally from France and Germany; some from England and United States.

Nails, iron and copper—principally from France; some from the United States.

Buttons—principally from France; some from Germany and Italy.

Tape—principally from France; several of the manufacturers have their names woven in the tape.

Wooden pegs are not used. One factory uses some imported ready-made uppers, which come from Italy. Many styles of shoes of black, russet, and patent leather, congress, lace, button, and oxford ties, for men, women, and children, are now manufactured. Cloth and kid tops, patent-leather foxed and tipped, patent-leather dancing pumps, and white canvas shoes are made. Narrow toes are popular, and most shoes have tips.

PRICES.

Description.	Price.	
	<i>Pesos.</i>	
Men's black, goat or calf, cloth or kid top, button, lace, or congress, with or without tips, sewed soles.....per pair...	9 to 12	\$2.61 to \$3.48
Same in russet.....do.....	8 to 11	2.32 to 3.19
Men's patent leather, sewed soles.....do.....	10 to 14	2.90 to 4.06
Men's calf or goat, lace, congress, or button, nailed soles.....do.....	6 to 7	1.74 to 2.03
Men's russet, nailed soles.....do.....	7 to 8	2.03 to 2.32
Women's calf or kid, sewed soles, lace or button.....do.....	7 to 9	2.03 to 2.61
Women's nailed soles, same as above.....do.....	6 to 8	1.74 to 2.32
Women's slippers.....do.....	5 to 6	1.45 to 1.74
Children's lace or button, sewed soles, calf, kid, or russet.....do.....	5 to 6	1.45 to 1.74
Children's calf, kid, or russet, nailed soles.....do.....	4 to 5	1.16 to 1.45

IMPORTED SHOES.

Shoes can be bought in the United States at a price much less than is asked for them here. Many French, German, Austrian, Italian, and Spanish shoes and slippers for men, women, and children are sold. Some English shoes are imported, but are principally sold in the interior. With the exception of the United States shoes, which are somewhat higher, the prices asked for imported shoes are about the same as those at which the home product is sold.

During the year ended June 30, 1898, the importation of shoes and leather was as follows:

Country.	Shoes.		Leather.	
	Packages.	Weight.	Packages.	Weight.
		<i>Kilograms.</i>		<i>Kilograms.</i>
England.....	62	3,800	189	12,059
France.....	477	25,422	408	41,808
Germany.....	21	1,309	178	13,060
Italy.....			8	559
Spain.....			15	1,157
United States.....	11	528	29	1,838
Total.....	571	31,059	827	70,481

It must be borne in mind that a great many Spanish, Italian, and Austrian shoes reach this country through English and German ports.

Duties on shoes, leather, and shoemakers' supplies.

Articles.	Class.	Duty.	U. S. gold.
			<i>Cents.</i>
Shoes.....	14	1 peso per kilogram,* plus 50 per cent, plus 25 per cent.....	54.3
Sole leather.....	6	20 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	8.7
Upper leather.....	7	30 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	13.05
Uppers, ready-made.	14	1 peso per kilogram, plus 50 per cent, plus 25 per cent.....	54.3
Pegs.....	8	40 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	17.4
Nails:			
Copper	9	50 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	21.7
Iron	4	5 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	2.17
Thread:			
White	8	40 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	12.4
Colored	10	60 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	26.1
Buttons	9	50 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	21.7
Tape	11	70 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	30.45
Sewing machines...	4	5 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	2.17
Shoemaking machines.	4	do	2.17
Shoemakers' tools.	6	20 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	8.7
Knives and forms...	6	do	8.7
Other shoemakers' tools.	8	40 centavos per kilogram, plus 20 per cent, plus 25 per cent.....	12.4

* 1 kilogram = 2.2046 pounds.

These duties are levied on the gross weight of the package. They are payable in Colombian currency at its face value.

LOCAL MANUFACTURES.

The high duty imposed on imported shoes is an encouragement to the home industry. The work in the factories is all done by men, who are paid by the piece, as follows:

	Pesos.	Cents.
Shoes with sewed soles.....per pair...	2	=58
Shoes with nailed soles.....do.....	1.50	=43.5

It must be remembered that the figures and data given relate only to the manufacture of shoes and the better class of slippers. Such foot wear is worn by well-to-do people and to some extent by the working people for dress; but the popular articles of foot wear, and those worn by the great proportion of the population, are the "babuchas" and alpargatas. The former are slippers and the latter are a kind of sandal. Both are made in the country. The babuchas are made with leather soles, without heels. The uppers are either of white canvas or a cheap black velveteen. Some have leather toe pieces. They are made principally by women and are sold in all the small shops and on the streets at from 5 to 12 reals (equal to

from 14.5 to 33.8 cents gold) per pair. The alpargatas (sandals) are made principally in the interior. These have woven-hemp soles, with cotton or wool toe and heel pieces. They cost from 40 to 80 centavos (from 11.6 to 23.2 cents gold) per pair.

While labor is comparatively cheap, it is decidedly uncertain. The natives, owing to the fact that they can live very cheaply, work only when it suits their fancy, and from the best-paid labor to the cheapest ordinary servants are a very independent class.

GENERAL REMARKS.

The gold value of the Colombian paper currency is subject to great and frequent fluctuations. The gold value of the exports represents that declared at the time of exportation. In giving the equivalent gold values for all other prices, I have based my calculations on the prevailing rate of exchange.

I believe there will be a demand in the near future for improved processes and machinery for tanning leather and for labor-saving machinery for manufacturing shoes. The United States should be in the field to furnish this machinery and also many supplies now coming from European countries.

This country exports a large quantity of hides and skins. During the year ended June 30, 1898, the exportations were as follows:

Description.	Number.	Weight.	Value.
		<i>Kilograms.</i>	
Hides.....	208,294	2,336,357	\$587,659.40
Goatskins	*1,615	32,749	24,535.00

* Packages.

About 87.5 per cent of the hides and about 26.8 per cent of the goatskins were shipped to the United States. A small portion of such shipments were in transit to Europe, but, as United States invoices are as a rule made out for shipments which give the New York agents the right to enter the merchandise in the United States if it is desired, it is impossible at this port to tell just what proportion was actually forwarded to Europe.

In addition to the shoe manufacturers, I give the names of leather manufacturers at this city, as follows: Joaquin M. Lascano, Francisco Insígnias S., Correa Heilbron & Co., Ferran Hermanos, and Rodriguez Müller & Co.

W. IRVIN SHAW,
Consul.

BARRANQUILLA, *March 1, 1899.*

SHOE TRADE IN ECUADOR.*

The following table will show the volume of shoe imports into Ecuador:

Country exporting.	1897.		1898.	
	<i>Silver.</i>	<i>Gold.</i>	<i>Silver.</i>	<i>Gold.</i>
Belgium	\$50.00	\$22.45	\$500.00	\$210.50
England	13,769.00	6,182.28	22,220.00	9,358.41
France	48,190.00	21,637.31	8,364.00	3,523.35
Germany	4,627.00	2,077.52	2,080.00	1,254.58
Peru	1,200.00	538.80		
Spain			2,320.00	980.51
United States.....	24,439.00	10,973.11	6,285.00	2,645.99

These figures are from the custom-house records and refer exclusively to foot wear of leather. Duties are charged by gross weight—\$1.67 silver† per kilogram.

There is no prejudice against American goods in this country; our shoes are considered higher in grade, and perhaps in price, than those from other countries. The same is true of other lines. A number of prominent firms here carry a small line of American shoes.

Competent salesmen should visit the country, in order to obtain knowledge of requirements and scope of the trade, and I think results would justify expense. Unless salesmen are sent, it is certain that England, France, and Germany, whose representatives exploit this field with zeal and frequency, will continue to enjoy the bulk of the business. A New York salesman recently obtained a large order, and expressed surprise at his unexpected success.

Imported shoes are retailed here at from \$3.50 to \$8 gold, according to quality. All varieties of finish are on the market, and only an expert can judge of technical requirements.

Trade manuals are useful only in Spanish, as a supplement to the exertions of a salesman; otherwise, they receive no attention and are money wasted.

The merchants of this city are exceptionally substantial, and representatives of American firms who have visited this country find results very satisfactory. They would be much more so, were our commerce not handicapped by excessive freight rates via the Isthmus, double and triple those from Europe. An isthmian canal is the only "open sesame" to trade on this coast.

PERRY M. DE LEON,
Consul-General.

GUAYAQUIL, *April 24, 1899.*

* This report was made in answer to inquiries by a Massachusetts board of trade, to which Advance Sheets have been sent.

† The value of the Ecuadorian peso was estimated by the United States Director of the Mint, April 1, 1899, as 43.4 cents.

SHOE TRADE IN BRITISH GUIANA.

In reply to a letter from a Massachusetts board of trade,* Consul Moulton writes from Demerara, April 22, 1899:

Imports into British Guiana are mostly from England; some come from the United States. Surinam imports from England and Germany; Cayenne from France.

Men's low shoes sell here at \$1.20 to \$1.68; a few at \$2.40 to \$3.84. Boots sell up to \$5.

Split hide and satin hide are used; calf quarters and kid uppers in black. Tan shoes are popular.

Foot wear for this market must have wide fittings, 4 and 5 English. The Portuguese, who number about 12,000, universally wear shoes made on the Mexican last, which is pointed and has an upward curve to the toe. Out of a total population of 278,000 in this colony, 217,000 people are either black, colored, or East Indian coolies, a majority of whom go barefooted a great portion of the time, for the reason that their occupation or their personal comfort does not require them to be shod; nor will their limited means permit the expense. Hence the conformation of their feet is such that to crowd them into the elegant and fashionable American boot, on the special occasions like Sundays or holidays, would induce such a fine frenzy of misery that neither religious devotion, peace of mind, nor graceful deportment would be promoted.

It is estimated that about 5,000 pairs are made by hand in this city. Probably, not more than 30,000 of the total population wear shoes habitually the year round.

During the year ended March 31, 1898, boots and shoes to the value of \$137,590 were imported into British Guiana, of which \$10,000 worth came from the United States and the balance from England. A portion of this importation went to Surinam, Dutch Guiana.

SHOES IN CHINA.

The following is a summary of information contained in a letter (dated April 21, 1899) from Consul-General Goodnow, of Shanghai, to a Massachusetts board of trade, and in a letter to a Texas firm from Mr. Barchet, the interpreter of the consulate-general in Shanghai, forwarded by Mr. Goodnow under date of April 19:†

There are no American-made men's shoes for sale here. A good

* To which Advance Sheets have been sent.

† Advance Sheets have been sent the correspondents.

line of shoes would find a market among the foreigners in China. Most of the foreign shoe dealers, however, being English, they naturally prefer to handle English goods, and men's shoes come chiefly from that country. Foreign articles sell at \$14 Mexican (\$6.60 gold).*

All foreign clothing, including shoes, can be imported free into Shanghai and to other open ports in China; but when such goods are transhipped into the interior, they are subject to a duty of $2\frac{1}{2}$ per cent ad valorem.

American boots and shoes are preferred by most foreigners in China; but before beginning business here, it may be well to take into consideration the number of people who would be likely to buy, and the present condition of trade.

The foreign population of Shanghai is in the neighborhood of 5,000, and the total number of foreigners all over China (including Hongkong, which is British) probably does not exceed 15,000. To meet their wants, shoes have hitherto been imported in small consignments from England, Germany, and the United States. There are also a number of native and Japanese shoemakers, who make shoes to order at reasonable prices: Ladies' shoes, at \$4 Mexican (\$1.88 in United States currency); men's shoes, from \$4.50 to \$6 Mexican (\$2.12 to \$2.83). These prices include patent-leather shoes, which are hand sewed and comfortable as a rule, though in style they do not compare with the American shoe. Patent leather is popular. American and Japanese leather is used for the shoes made in Shanghai.

As to banking facilities, Shanghai has connections with all parts of the civilized world, and the Hongkong and Shanghai Banking Corporation has agencies in San Francisco, as well as in New York City, which will be found reliable and accommodating.

The shoes which natives wear—peculiar to China—are made of cloth or leather. Their cloth boots and shoes have soles half an inch to 1 inch in thickness, which are made of rags and paper firmly stitched together; these can be bought from 25 cents (gold) upward.

Native leather boots and shoes shod with heavy iron nails are worn in wet weather; they are worth 50 cents to \$1 (gold) per pair.

If there can be put on the market here shoes as good in quality as those the Chinese make, at a lower price, an unlimited field is open to enterprise. It would hardly be worth while to have circulars, etc., translated.

* Taking the value of the Mexican peso on April 1, 1899, as estimated by the United States Director of the Mint, as 47.2 cents.

GERMANY IN CHINA.

Consul Monaghan, of Chemnitz, under date of May 3, 1899, says:

No nation is better posted as to what is going on in China than is Germany, and no nation has taken greater care to provide the necessary ways and means for finding out facts. The Kaiser's brother, with quite an array of ships and men, has been kept in oriental waters with a view to being on hand in case complex contingencies should arise out of which Germany might make a successful move. Reports from the East inform the public here that Prince Henry has just gone on board the *Gefion* at Shanghai for a trip up the Yangtze Kiang to Hankau, a distance of 584 sea miles. The Yangtze Kiang is China's most important river. Navigable for ocean steamers, at high tide or under favorable conditions, as far up as Hankau, and for river boats hundreds of miles farther, it offers, as a glance at a map of China will show, traffic with an entire nation. Commerce on this mighty river hitherto has been in the hands of the English and Chinese. Germans hope to have a hand in all that goes up and down its water in future. Two fine river boats, built for a German company, begin to ply this summer between Shanghai and Hankau. Recent reports tell of a second company, in eastern Asia, eager to participate in the enormous freight and passenger traffic of the Yangtze Kiang, ordering a fleet of steamers. After the treaty of Simonoseki, Germany obtained concessions on the Yangtze Kiang at Hankau, the importance of which to foreign trade, but more particularly to German trade, it would be hard to measure. Their value is constantly increasing. Hankau is the entrepôt, so to speak, for central, northwest, and west China. Its traffic in goods, as far as figures have been kept by foreigners, has gone up to \$50,000,000. The export of tea—fully half of the total—is, or was till quite recently, in the hands of the English and Russians; almost, if not quite, all the rest of the trade is in the hands of Germans. As the most important open port in the center of China, Hankau is regarded already as a connecting link in the Canton and Peking Railway. It is looked upon as the terminus and principal station of the road projected along the Yangtze Kiang.

Germans see in these concessions at Hankau on the Yangtze Kiang the bases on which to build up enormous trade relations, not only along the river, but in the interior, and more particularly in the rich provinces of central and western China. Mercantile centers here see in Prince Henry's trip up the Yangtze Kiang to Hankau new proof of the Emperor's determination to do all he can to increase German influence in the East. Every effort is being made to make

the best of every concession, no matter how small it is. Once the thin edge of the wedge is in, this Empire finds ways and means, by patient labor, to enlarge the opening. If the Germans can buy wool in Australia and South America, cotton in the Carolinas and Texas, iron in Sweden, coal in England, and ship its manufactured goods to every corner on earth, there is no good reason why we should not outsell them. The things Germany exports we make as good and as cheap, if not better and cheaper. If we must take China's tea and silk, let us sell China our engines, boots, shoes, cottons, agricultural and mining implements. Russia and China are developing their resources, and will want just such tools as have helped us to be successful. Among the 11,667 foreigners settled in China at the end of 1897 (the year previous had 10,885; 1894, 9,350), England led with 374 firms of 4,929 persons; the United States 1,564 persons (1,439 in the year previous); Japan, 1,106 (852 a year before); Germany, 950. France has fallen off remarkably, viz, from 933 in 1896 to 698 in 1897. The only others worth mentioning are the settlements of Swedes, Norwegians, Spaniards, and Portuguese. The Russians and Dutch are very few. Under existing conditions and influences, Russia will not remain long in the rear.

Under date of April 18, Mr. Monaghan writes:

A director of the North German Lloyd was sent by the German Government some time ago to study Kyao-chau and its contiguous territory, with a view to its exploitation with German capital and by German colonists. The report, which has been handed to the Kaiser, is said to be one of the most exhaustive of its kind ever written. It points out coal as one of the valuable possessions of the new territory, and says: "While it is not as good as England's, it will answer all purposes for shipping and industrial pursuits."

MICA FIELDS IN CHINA.

Consul Fowler sends from Chefoo, under date of March 20, 1899, a letter from Mr. F. H. Chalfant, of Wei-hsien, in regard to the mica fields in Shantung discovered by him. The letter reads, in part:

I inclose some samples—a few small bits clipped at random from a 50-pound chunk in my possession.* It is not the best, but some refuse rejected by the Chinese as too opaque for use for lanterns and transparent pictures, the only uses that the Chinese find for this valuable commodity. I am assured by the Chinese at the mica mines that they procure the stuff "as clear as air." There is no reason

*The samples have been filed for reference in the Bureau of Foreign Commerce. The United States Geological Survey, to which a specimen was sent for analysis, says: "This is an ordinary muscovite mica, like all other samples in general composition."

why there should not be found mica of all grades in the region. The little map inclosed will show just where the mica occurs.*

In 1893 (I believe it was), I first heard through the Chinese that mica was mined in Chü-Ch'eng. I at once sent a reliable man, with instructions to buy me a donkey load, but not to say it was for a foreigner. He happened to reach the place during the wheat harvest, when the people said it did not pay to work the mines. He bought me what they had left over, after the best had been picked out by petty dealers, at the rate of 5 cash per catty.† This was in the rough. I knew that it would never do to give the men an idea that there was any demand for the mica by foreigners, for then the price would jump up to a prohibitory figure. A year later, I arranged with Mustard & Co. (Shanghai) to forward a sample of the mica to the United States for inspection. I sent them 200 pounds of the rough material, but was again unfortunate in finding the mines idle. The villagers told my messenger to go farther southeast, toward the seacoast, to obtain the best quality. He was limited in time and returned with what he could produce at the nearest place. This proved to be very poor quality. I told Mustard's the circumstances, and indicated the danger of stirring up the avarice of the people residing in the mica district, before they had secured an option upon a large tract of mica-bearing land. They saw the force of this. I fear the poor quality of the mica I was compelled to send them discouraged their United States correspondents, for I never had a report upon it, though they paid the expense of the experiment.

Aside from this effort, nothing has been done. In the summer of 1895, an Englishman, Captain O'Sullivan by name, called at Wei-hsien. I gave him all the information I could about the mica region. He went to Peking and Tientsin and tried to get a permit from Li Hung Chang to open a mine. Nothing came of this. Next, the Germans occupied the country adjacent to the mica region. One of their engineers, or rather mineralogists, was here not long ago, and I told him what I knew about the mica deposits. He said he would investigate. I have no pecuniary interest in the business (should any ever be developed), but feel that there ought to be some prospecting for the benefit of the world at large.

COLLECTION OF DEBTS IN JAPAN.

In reply to the Department's instruction of March 17, 1899,‡ I have to state that the method of collecting debts in Japan is in general similar to that prevailing in the United States, namely, by action at law simply or by action with attachment of the debtor's property.

The courts provided for this purpose are:

- (1) Ku saibansho, or local courts, having jurisdiction over claims under 100 yen (\$50) in amount.
- (2) Chiho saibansho, or district courts, having jurisdiction in cases involving larger amounts. From the chiho saibansho appeals lie to the
- (3) Koso in, or appeal courts, and to the
- (4) Daishin in, or supreme court of the Empire.

* Filed for reference in the Bureau of Foreign Commerce.

† NOTE BY CONSUL.—One catty = $1\frac{1}{2}$ pounds; 800 cash = \$1 Mexican; say, 25 cents in United States currency per 100 pounds.

‡ Sent at the request of a Virginia correspondent, to whom Advance Sheets have been forwarded.

Foreign plaintiffs not residing in Japan should furnish their agents or attorneys here with ample powers of attorney, with authority of substitution. Such documents should be attested by a diplomatic or consular officer of Japan. Foreign plaintiffs are required to give security for costs.

The period of limitation of actions arising out of contracts for the sale of goods is two years.

Foreign defendants in Japan are sued before the consular courts of their respective nations. This will cease to be the case after the operation of the new treaties in July next.

YOKOHAMA, *April 16, 1899.*

JOHN F. GOWEY,
Consul-General.

JAPANESE CIVIL-SERVICE REGULATIONS.

The Department has received from Mr. Herod, secretary of the legation at Tokyo, under date of April 10, 1899, translation (appearing in the Japan Times) of the civil-service rules recently promulgated, providing qualifications of candidates for posts of certain rank, as follows:

ARTICLE I. Civil officials of the chokunin* rank shall be appointed from among those who possess any of the undermentioned qualifications. These provisions, however, shall not apply to posts requiring personal appointment by the Emperor and to others coming under special provisions.

(1) Those who are actually holding, or have once held, posts of the sonin rank of the third grade, excepting those who have been appointed in virtue of special provisions, technical experts and school instructors.

(2) Those who have held for not less than one year civil posts of the chokunin rank, otherwise than in virtue of special provisions or as instructors or experts.

(3) Those who have held civil posts of the chokunin rank, otherwise than in virtue of special provisions or as instructors and technical experts, and who possess the qualifications specified in clause 1, Article II (namely, the certificate of the higher civil-service examination).

(4) Those who are actually holding or have held for not less than two years posts of public prosecutors of the chokunin rank.

Those who are actually holding or have held for not less than two years posts of judges of the chokunin rank may be appointed chokunin civil officials of the Department of Justice.

Those who are actually holding or have held, for not less than two years, posts of the chokunin rank of the imperial universities or at any of the educational insti-

* Japanese officials are divided into four grades—shinnin, chokunin, sonin, and hannin. Officers of the first grade include cabinet ministers, privy councilors, etc. The other grades include officers of the rank of vice-minister down. They are subdivided into classes: Chokunin, two; sonin, five; and hannin, eleven. Besides these grades are nine ranks which include all other officials and many private persons. The system is complicated, and there are no exact English equivalents for the titles given.

tutions under the direct control of the Department of Education may be appointed chokunin civil officials of that department.

Excepting in cases for which special provisions exist, military officers of or above the rank of major-general and the naval officers of or above the rank of rear-admiral may be appointed to the civil posts of the chokunin rank in the Departments of War and of the Navy, respectively.

ART. II. Excepting in cases for which special provisions exist, civil officials of the sonin rank shall be appointed from among those who possess any of the following qualifications:

(1) Those who have successfully passed the higher civil-service examinations and possess certificates thereof.

(2) Those who have held posts of higher civil service for not less than two years, otherwise than in virtue of special provisions, or as instructors or experts.

(3) Those who are actually holding or have held for not less than two years posts of public prosecutors.

Those who are actually holding or have held for not less than two years posts of judges may be appointed civil officials of the sonin rank in the Department of Justice.

The Japan Times adds:

The only points of difference between the above-mentioned provisions concerning sonin civil officials and the corresponding articles in the existing regulations consist in the time qualification, put at three years in the latter, both for clauses 2 and 3, and the extension to judges of eligibility to civil posts of the sonin rank in the Department of Justice.

The provisions regarding the appointment of civil officials of the hannin rank in the new and old regulations do not differ in any essential respect, the principal items of qualification in their case being graduation from the ordinary middle schools and the possession of the certificates of either the ordinary or the higher civil-service examinations.

THE CIVIL OFFICIALS' STATUS AND DISCIPLINARY REGULATIONS.

Simultaneously with the civil-service appointment regulations, two other correlated regulations have been issued, one relating to the status of civil officials and the other to their discipline. We give below the gist of the two regulations:

The civil officials' status regulations.

The regulations apply to civil officials in general, excepting officials requiring personal appointment by the Emperor, ministers to foreign countries, personal secretaries, and others whose appointment is specially provided by law.

Civil officials shall not be deprived of their posts unless as a result of criminal sentence passed by a court of law or of disciplinary punishment or unless they come under any of the following clauses:

(1) When, in consequence of physical deformity or incurable disease or in consequence of debility of body or mind, they are adjudged unfit for the discharge of their duties.

(2) When, in consequence of incapacity for the discharge of duties as a result of wounds or illness, or from consideration of their personal convenience, they request of their own accord to be relieved of their posts.

(3) When a superfluity has been produced as a result of the amendment of an official organization or of the reduction of the fixed number of officials.

Cases coming under clause 1 mentioned above shall be judged by the higher or ordinary civil-service disciplinary committee, according to the rank of the officials concerned. Furthermore, no civil official shall be transferred against his will to another post lower in grade than that he is actually occupying.

But civil officials may be placed on the *kyushoku* list (temporary retirement) when they come under any of the following clauses:

(1) When, in accordance with the provisions of the disciplinary regulations, they are handed over for examination to disciplinary committee.

(2) When accused or informed against in connection with a criminal affair.

(3) When a superfluity has been produced as a result of the amendment of an official organization or a reduction of the fixed number of officials.

(4) When their retirement is required by the necessity of business arrangements in the respective offices.

As for cases coming under clauses 1 and 2 mentioned above, the period of temporary retirement shall be coextensive with the time they are in the hands of either a disciplinary committee or of judges. Three years shall be the period of temporary retirement for cases coming under the remaining two clauses.

In the meanwhile, the officials on the temporary retirement list shall be entitled to one-third of the full pay.

The civil-service disciplinary regulations.

Excepting officials requiring personal appointment by the Emperor or those officials for whom special provisions exist, all other civil officials shall not be subject to disciplinary punishment, unless in accordance with the present regulations, cases under which civil officials are liable for disciplinary punishments being as follows:

(1) When they have acted contrary to or neglected their official duties.

(2) When, whether in connection with the discharge of their official duties or otherwise, they have committed acts calculated to impair official prestige or credit.

Disciplinary punishments shall be of three forms, namely, dismissal, reduction of salary, and reprimand. (Resignation by instruction, *yushi menkan*, is also included in the existing disciplinary regulations, but this has been struck out in the new regulations.) The rate of reduction of salaries has been somewhat increased. Whereas the existing provisions put the minimum and maximum limits at one-tenth of one month's salary and three months' full salary, respectively, the new regulations provide that the reduction shall be one-third or less of the monthly pay for a period varying from one to twelve months.

All the disciplinary affairs of civil officials, excepting those of special classes, shall be dealt with in the future by the higher disciplinary committee where officials involved are those of *chokunin* or *sonin* rank, and by the ordinary disciplinary committee where officials of *hannin* rank are concerned. The higher disciplinary committee shall consist of one chairman, to be filled by a privy councillor, and of six commissioners, to be appointed from among the president and *chokunin* judges of the administrative litigation court, *chokunin* judges of ordinary courts of law, and other civil officials of the same rank. On the other hand, an ordinary disciplinary committee shall be established at all the important central and local offices, namely, the cabinet, privy council, departments of state, Formosan Government, board of audit, administrative litigation court, metropolitan police board, prefectural offices, Formosan local offices, House of Peers' office, and House of Representatives' office.

NEW LAWS IN JAPAN.

Mr. Herod, secretary of the legation at Tokyo, sends, under date of April 10, 1899, translations of recent laws relating to the duties of consular officers and to the arrest and detention of mariners of foreign vessels, as follows:

LAW RELATING TO CONSULAR DUTIES.

ARTICLE I. Restrictions with regard to matters in the treaties especially relating to the rights of consular officers shall, within limits prescribed by law, be fixed by ordinance.

ART. II. When provisions of law are wanting in regard to matters relating to the duties of consular officers under the treaties, in cases where such provisions of law are required, they shall be determined by ordinance.

ART. III. Consular officers and others who, in accordance with this law, are performing consular functions shall perform their duties in harmony with the provisions of the laws and treaties.

Such officers, however, may conform to the usages founded on international law or to the special usages of the place of residence.

When the preceding clause can not be observed, special regulations may be fixed by ordinance.

ART. IV. When the date of the operation of a law in foreign countries is not fixed, the date of the operation of said law shall be fixed by ordinance.

ART. V. The limits of jurisdiction relating to the duties of consular officers shall be fixed by notification.

ART. VI. Consular officers, who by treaty in usage have authority to exercise consular judicial powers, shall perform their duties relating to civil and criminal cases and to registration in harmony with Articles VII and XIII.

ART. VII. With respect to the duties mentioned in the preceding article, consular officers may, within limits not opposed to the law, treaty, or usage, perform the functions of a district or local court of justice.

ART. VIII. Consular officers can not conduct a trial for a major criminal offense. In minor criminal cases, a preliminary examination is not necessary.

ART. IX. The trial of cases of major criminal offenses, the preliminary examination of which has been conducted by a consular officer, shall belong to the jurisdiction of the Nagasaki district court.

ART. X. When diplomatic correspondence is necessary relating to a case belonging to the jurisdiction of a consular officer, the Minister for Foreign Affairs may order the consular officer not to take jurisdiction and may cause the accused to be placed in a prison of the country.

In the case mentioned in the preceding clause, the Minister of Justice shall, when the case falls within the province of a district court, cause the public prosecutor of the Nagasaki court of appeal to apply to that court to appoint the place of trial; and when the case belongs to the province of a local court, he shall cause the public prosecutor of the Nagasaki district court to apply to that court to determine jurisdiction.

ART. XI. With respect to the petition and trial mentioned in the preceding article, the provisions of Article XXXIII of the law of civil procedure shall be applied.

ART. XII. Appeal from a decision in a case tried by a consular officer belonging

to the scope of a district court shall be made to the Nagasaki court of appeal. Appeal from the decision in a case tried by a consul which falls within the scope of a local court shall belong to the jurisdiction of the Nagasaki court.

ART. XIII. A consular officer may cause a member of his consulate or a police officer to act in the capacity of public procurator or clerk of court. When there is no suitable person to serve in the capacity of clerk of court as provided in the preceding clause, the consular officer may select some Japanese subject residing within the district of his jurisdiction to perform the duties of clerk temporarily.

ART. XIV. A consular officer may cause a member of his consulate or a police officer to perform the duties of public undertaker.

The person who executes the function mentioned in the preceding clause may, on his own responsibility, specially intrust the performance of the duties to another suitable person.

ART. XV. Any person who desires to act in the capacity of counsel or attorney, except in accordance with the provisions of law, must receive the permission of the consular officer.

ART. XVI. The provisions relating to contempt of court usually applied to courts of law shall not be applied to consular officers or others performing their duties in accordance with this law.

ART. XVII. In case there is no person to perform the duties mentioned in Articles XIII and XIV, the Minister of Foreign Affairs may dispatch an official from another consulate in the same country to perform the said duties.

ART. XVIII. A person who is not a consular officer can be appointed by ordinance to perform the duties of such officer, as set forth in the provisions of this or other laws, only in a place where there is no consulate established.

ART. XIX. The terms "consul or consular officer" as used in this law and other laws designate consuls or their deputies who are not honorary consuls.

ART. XX. Provisions necessary for the enactment of this law shall be fixed by ordinance.

ART. XXI. The regulations of consular courts in China and Korea shall be abolished from the date of enforcement of this law.

LAW RELATING TO ARREST AND DETENTION OF MARINERS OF FOREIGN VESSELS.

ARTICLE I. Assistance in the arrest or detention of mariners of foreign vessels, as provided for in the treaties of navigation and commerce and consular conventions with the various treaty powers, shall be given by the public prosecutor on the application of the proper consular officer.

ART. II. In the following cases, the public prosecutor can not comply with the request for assistance in arrest or detention:

- (1) When the person to be arrested or detained is a Japanese subject.
- (2) When the person is under trial for a major or minor criminal offense in Japan or undergoing punishment therefor.
- (3) When a mariner has already been released according to Article VIII and application is again made on the ground of the same offense.
- (4) When the consular officer does not include with the application a correct copy of the ship's register and the list of names of mariners or a certified document sufficient to identify the mariner.
- (5) When the consular officer will not guarantee the costs connected with the assistance.

ART. III. The public prosecutor, upon receipt of an application from a consular officer for the arrest or detention, if the request appears to be a proper one, shall comply with the same immediately.

ART. IV. When the public prosecutor orders the arrest of a mariner, he shall issue a warrant of arrest.

ART. V. The person to whom the order for the execution of a warrant of arrest is given shall, when the arrest is made, deliver (the person) to the public prosecutor who issued the warrant of arrest.

ART. VI. In the case mentioned in the preceding article, the public prosecutor shall immediately inspect the person, and, when it appears that he is without doubt the person designated, shall deliver him to the consular officer.

ART. VII. On application from the consular officer, the mariner who has been arrested shall be put in prison by the order of the public prosecutor.

ART. VIII. A mariner who has been detained shall, on the application of the consular officer, be released; or he may be released if within six months from the day of arrest no application has been received for his delivery.

ART. IX. In regard to the issuance and execution of a warrant of arrest, the provision in the law of criminal procedure respecting warrants of arrest shall be applied.

ART. X. Application shall be made by the public prosecutor to the proper consular officer for the amount of actual expense connected with the assistance.

ART. XI. The public prosecutor shall, on receipt of an application for assistance in arrest or detention, immediately report the same to the Minister of Justice; likewise when the request appears to be one that can not be complied with, it shall be reported to the Minister of Justice on the completion of the proceedings.

JAPANESE COMMERCIAL MUSEUM.

Consul-General Gowey, of Yokohama, on April 18, 1899, forwards copies of the new regulations of the Imperial Commercial Museum, an institution under the control of the Department of Agriculture and Commerce of the Japanese Government. The objects sought to be attained by the museum, says the consul-general, are of the same nature as those of the Philadelphia Commercial Museum.

The regulations read:

REGULATIONS OF THE IMPERIAL COMMERCIAL MUSEUM OF THE IMPERIAL DEPARTMENT OF STATE FOR AGRICULTURE AND COMMERCE.

ARTICLE I. Samples of the following articles of commerce shall be placed on exhibition in the museum:

(a) Home products.

(1) Staple commodities of export.

(2) Articles capable of future exportation.

(3) Articles to compete with imported commodities.

(4) Raw materials of industry.

(b) Foreign products.

(1) Articles serving as models for home manufactures.

(2) Articles competing with Japanese products in foreign markets.

(3) Articles apprehended as future competitors with our export commodities.

(4) Articles commanding large sales in foreign markets, imported thereto from other countries, and capable of being manufactured in this country.

- (5) Staple commodities of import.
- (6) Articles promising future importation.
- (7) Raw materials of industry.

ART. II. Besides those specified in the preceding article, samples and models of patents, registered designs, and trade-marks forwarded from the imperial patent office shall be placed on exhibition.

ART. III. The museum authorities will accept, in accordance with the rules provided for the purpose, and provided there is no special reason to the contrary, exhibits on loan or donations from Japanese and foreigners of the articles enumerated in Article I, and a space shall be set aside for such exhibits in the respective departments classified under Article V.

ART. IV. In the case of articles of an explosive, combustible, or otherwise injurious nature, only the covers used for packing may be placed on exhibition.

ART. V. Exhibits will be classified and arranged in the following six departments: Agricultural products, forestry products, aquatic products, mining products, manufactures and patents—each of which is subdivided into several groups.

ART. VI. An official catalogue will be published from time to time, for distribution to those interested therein.

ART. VII. Explanation in regard to the articles on exhibition will be given to any visitor applying for same.

ART. VIII. The museum authorities will be in correspondence with commercial, industrial, and educational museums and schools at home and abroad, and will exchange printed matters as well as exhibits.

ART. IX. Any person desiring to purchase an exhibit will, on application, be referred to the exhibitor. In such case, the museum authorities will not be held responsible for any difference arising from the transactions thereof.

ART. X. When any information is requested in connection with an article on exhibition, as to its market price, freight charges, customs duty, wholesale price, quantity available, credit obtainable on the goods, etc., the same will be furnished after due investigation. In special cases the expense (if any) required for such investigation shall be paid by the applicant for information.

ART. XI. An application to ascertain the demand for any article newly manufactured, and to have same introduced to a possible purchaser, shall, after due investigation, be complied with, provided that the applicant shall defray any expense occasioned by such investigation.

ART. XII. An official bulletin shall be published by the museum, which will contain the home and foreign correspondence, reports, and other matters connected with foreign commerce.

ART. XIII. Those who are desirous of obtaining the bulletin shall send their names, addresses, and subscriptions to the publishing office; in special cases, it may be furnished free of charge.

ART. XIV. A reading room shall be provided in connection with the museum, where industrial and commercial reports and statistics, maps and charts, books of reference, the Official Gazette, and detailed statements of patents, designs, and trade-marks, together with newspapers and magazines, shall be kept for the use of visitors.

ART. XV. Applications of exhibitors for the prohibition of sketching, drawing, photographing, or otherwise reproducing articles placed by them on exhibition may be complied with and enforced.

ART. XVI. Visitors shall be admitted free of charge.

ART. XVII. Strict observance of the rules and regulations of the museum is required of visitors.

ART. XVIII. The museum will be daily open to the public—except on those

days specified in Article XIX—during the following hours, subject, however, to special closing or change of hours:

From January 8 to February 28, 9 a. m. to 3 p. m.

From November 1 to December 24, 9 a. m. to 3 p. m.

From March 1 to July 10, 8 a. m. to 3 p. m.

From September 11 to October 31, 8 a. m. to 3 p. m.

From July 11 to September 10, 8 a. m. to 2 p. m.

ART. XIX. The museum shall be closed on the following days: The day following national holidays, from January 1 to 7, from December 25 to 31.

REGULATIONS RELATING TO THE EXHIBITION OF ARTICLES IN THE IMPERIAL COMMERCIAL MUSEUM.

ARTICLE I. Any person desiring to exhibit articles in this museum must present to the museum authorities an application, accompanied by an inventory and detailed statement of each article, written in Japanese, English, German, or French, in accordance with the forms annexed herewith. When several articles not of kindred nature are to be sent in by one exhibitor, they must be properly classified before being sent.

ART. II. After due examination, the museum authorities will communicate to the applicant the suitability or otherwise of his articles for exhibition.

ART. III. As early as possible after receiving the notice of approval, the article or articles must be forwarded, securely packed.

Each package must be marked "commercial samples," and addressed to the "Imperial Commercial Museum, Department of State for Agriculture and Commerce, Tokyo," with the name and address of the exhibitor appended thereon.

ART. IV. The exhibitor must prepare a list of his exhibits and place the same in the package containing them. He shall be entitled to a receipt for the articles so forwarded, provided they conform in number and quality with the articles approved under Article II. In case of disparity or damage thereto, the same shall not be accepted for exhibition.

ART. V. Exhibitors may at any time change a portion or whole of their exhibits, or have them returned, while the museum authorities may notify an exhibitor to withdraw or change any or all of his exhibits when deemed necessary so to do.

ART. VI. Any exhibits recognized to be of special importance or benefit may be purchased by the museum authorities.

ART. VII. Exhibits may be accompanied by tables showing their yearly production and sales, and by trade-marks and covers generally used for packing them.

ART. VIII. The choice of location for the display of exhibits shall be determined by the museum authorities alone.

ART. IX. Care taking for the exhibits may be undertaken by the museum authorities, or by the exhibitors or their agents if such are located in Tokyo; in that case, the address of such care takers must be communicated to the authorities at the time of forwarding the exhibits.

ART. X. Exhibitors may undertake, by consent of the authorities, to arrange their own exhibits; and, when deemed necessary, the museum authorities may notify the exhibitors so to do.

ART. XI. Exhibitors are required to defray only the packing expenses and freight charges to and from the museum; all other expenses for arranging exhibits shall be borne by the museum, and under special circumstances freight charges may also be defrayed by same.

ART. XII. For exhibition of specially valuable articles the museum authorities may, when deemed necessary, pay rent for same.

ART. XIII. Exhibitors may, by consent of the authorities, place special decorations around their exhibits, or place them in decorated cases, at their own expense.

ART. XIV. In the absence of special conditions as mentioned in Article XI, any package for which freight charges have not been prepaid shall not be accepted. If the sender of such package is not known, the museum authorities shall have power to deal with it according to their discretion.

ART. XV. The museum authorities shall take proper precautions for the safe preservation of all exhibits, but shall in no way be held responsible for damage, stain, or loss caused by water, fire, robbery, or any other unavoidable cause.

ART. XVI. When the applications for space for exhibits become too numerous, or when otherwise deemed necessary, the museum authorities may temporarily decline to receive or arrange exhibits.

ART. XVII. In regard to exhibition of machineries, only small articles shall be accepted for the present.

APPENDIX.

Form of application.

Date ____.

To the Imperial Commercial Museum,

Department of State for Agriculture and Commerce.

I (or we), the undersigned, do hereby apply for permission to exhibit on loan (or to present) the articles specified in the accompanying inventory—and appoint (name and address) as agent—in conformity with the regulations of the museum.

Signature ____.

Address ____.

FORM OF INVENTORY.

- (1) Name of article and quantity.
- (2) Nature and quality thereof and measurement.
- (3) Shape, color, and design.
- (4) Price.
- (a) Retail price.
- (b) Wholesale price at the place of production.
- (c) Wholesale price after being landed in this country.
- (5) Period to be exhibited.
- (6) Disposal of the exhibit after the period has expired (return to owner, sale, or presentation to this or other commercial museum).

*Form of detailed statement.**

- (1) Place of production.
- (2) Name of producer, manufacturer, or manufactory.
- (3) Materials used in the manufacture and their respective places of production.
- (4) Quantity annually produced at that establishment.
- (5) Quantity annually sold.
- (6) Percentage of discount (if any) for wholesale trade.
- (7) Address of business offices (head office, branches, and agents).
- (8) Places where each article is in demand.
- (9) Social class of principal customers.
- (10) Seasons (if any) when chiefly required and when chiefly produced.
- (11) Cost of packing (per ton).
- (12) Freight charges (per ton, from the place of production to Yokohama or Kobe).
- (13) Time occupied in transportation.
- (14) Export duty (if any) and other charges.
- (15) Amount of subsidy or other aid, if any.
- (16) Any other useful particulars.

* As a copy of this statement is intended to be placed on view with the exhibit to which it refers, items of information which the exhibitor does not desire to make public must each be clearly marked "not to be made public," and will accordingly be omitted from the copy for exhibition.

COPPER AND BRASS IN JAPAN.

Consul-General Gowey writes from Yokohama, under date of April 24, 1899, to a Pittsburg Company:*

The customs returns show that during the year 1898 there were imported into Japan 224,941 pounds of copper plates, sheets, and rods, valued at \$29,243, and 93,925 pounds of yellow-metal sheathing, valued at \$9,970. What proportion of rods were included in the foregoing, the returns do not indicate.

Under the heading of exports, copper sheets and plates do not appear; but of refined copper there were shipped abroad during last year 35,709,650 pounds, mostly in the shape of slabs and ingots, valued at \$3,553,245. Exports of manufactures of brass, at the same time, were valued at \$9,856.

The efforts made to produce sheet copper in Japan, I am informed, have not been encouraging, and the press has lately reported the failure of one of the largest concerns in this line of trade at Osaka. Japanese copper, while of fine appearance, has produced much dissatisfaction as sheathing on vessels—salt water destroying it in a very short time. An American vessel was sheathed at this port with Osaka copper purchased from a prominent Tokyo firm during the past year, and in about two months thereafter the metal was discovered to be entirely eaten through in so many places that its removal was made necessary, and Muntz metal substituted.

For the latter article, or its equivalent, there is undoubtedly a growing market in the Orient.

The American Trading Company and the China and Japan Trading Company at this port can doubtless furnish more precise details concerning the trade in these metals.

CULTIVATION OF TOBACCO IN THE PHILIPPINES.

I have noticed that the American newspapers generally have taken what seemed to me an unusual amount of interest in my report on "Tobacco in the Philippines," published in the CONSULAR REPORTS No. 222 (March, 1899), p. 451. Since then, I have obtained additional information on this subject, which I trust will be received as supplementary to what I have already written. In the first report I noted that a representative of the Dutch and English tobacco

* To whom Advance Sheets have been sent.

growers of what is known as the Sumatra leaf had passed through this city en route for northern Luzon, where he was to test the soil regarding the possibility of the introduction of Sumatra tobacco.

During the past week, a Mr. Velge, who for years has lived in northern Luzon in the employ of the Oriente Tobacco Company, arrived in this city from Aparri. Aparri is the port in northern Luzon from which the bulk of the Manila tobacco crop is shipped to the great factories in Manila. Mr. Velge (an Englishman) informs me that he has already thoroughly tested the soil with great success regarding the growth of Sumatra tobacco, and has conclusively proven that its introduction is practicable. Mr. Velge had previously been engaged in tobacco planting in Sumatra, where the soil would produce a crop only once in seven or eight years. In the experiments he made in the provinces of Cagayan, Isabela, and New Biscay, he found that the soil would grow a crop every year, producing a leaf 15 inches in length. It was even ascertained that the new soil was too rich, and that the old soil that had been under cultivation for some years produced a thinner and stronger leaf. Although the experiments were so eminently successful, the wholesale cultivation of the Sumatra leaf was never undertaken because of the obstructive policy of the Spanish régime. Mr. Velge estimates that 1 acre of this ground will produce from six to ten thousand plants, or trees, as they are technically termed. One native is considered capable of planting and harvesting 1 acre. He is paid for his services in the cultivation of Manila tobacco about \$10 Mexican* for every 100 pounds of tobacco that is accepted by the warehouses. This means an income for him throughout the year of about 25 cents Mexican per diem.

Of course, at the date of writing there is almost nothing being done in the tobacco-raising provinces, as the ports are closed and their markets are shut off. Men with money who are on the ground when the country is thrown open and life and property are safe can realize large returns by investing in these rich tobacco lands; also in laying a railroad line through them from Aparri south.

ROUNSEVELLE WILDMAN,

HONGKONG, *April 26, 1899.*

Consul-General.

* \$4.72, taking the estimate of the United States Director of the Mint, April 1, 1899.

PEARL FISHERIES OF DUTCH EAST INDIA.

Consul Everett writes from Batavia, March 28, 1899:

I transmit herewith a report by Mr. Karl Auer, consular agent at Macassar, Celebes, on the pearl fisheries of Dutch India. Reference should be made to the report on the same subject by my predecessor, Mr. Rairden, printed on pages 645 and 646 of *CONSULAR REPORTS* No. 191 (August, 1896). By the following report, it will be seen that foreigners wishing to fish for pearls here must establish a company under Dutch charter before they can secure a concession.

SHELL FISHING IN THE EASTERN ARCHIPELAGO OF DUTCH INDIA.

Shells constitute one of the most important articles of exportation from Macassar. Up to the beginning of this decade, they were sought almost exclusively by natives, fishing in the shallow water in the bays, without using any diving apparatus. In 1893, the Pearling and Trading Company, Limited, London, sent a schooner and some luggers to the Aroo Islands to try exploitation in deeper waters. This company appears to have had good success, for its fleet left this archipelago only when forced by a Dutch law of 1894, to the effect that only inhabitants of the Netherlands and Netherlands India, or companies established in these countries and under the Dutch flag, should be permitted to engage in pearl fishing.

In 1896, the Eastern and Australian Trading Association, of Amsterdam, began operations, which, however, do not appear to have been successful, for the company liquidated in 1898.

In the meantime, residents of Dutch India were beginning to pay more and more attention to the shell fisheries, and Europeans, Chinamen, and Arabs endeavored to make arrangements with the native chiefs in whose territorial waters shells were supposed to be, and who generally granted the privilege of fishing for a fixed sum in cash, a rent, or a percentage of the quantities fished. Such contracts, however, were legal only after the sanction of the governor-general of Dutch India, which has been accorded without charge.

Shell fishing is at present done on the east coast of the Aroo Islands, on the east coast of New Guinea, on the Halmaheira and the islands thereabout, on the east coast of Celebes (poor), and the Timor group.

An undertaking on a larger scale is the Djoempandang Maatschappij, established at Macassar in 1898, with a subscribed capital of 150,000 florins (\$60,000), for fishing in the Timor waters, with a fleet of one schooner and ten luggers. The company has succeeded in securing apparently valuable concessions.

The chief market for mother-of-pearl shells is Paris; only small quantities are shipped to London, Hamburg, and Amsterdam.

There were exported in 1896 about 150 tons; in 1897, 200 tons; and in 1898, 250 tons. There is no doubt that 1899 will show a further considerable increase. Notwithstanding this augmentation, prices have been fully maintained. Aroo shells sell here at £140 (\$700) a ton; Timor, Ceram, and New Guinea and Celebes shells at £80 to £100 (\$400 to \$500).

Fishing is allowed during the whole year by the Government, but is temporarily prevented by the monsoons.

These companies have employed principally inhabitants of the Philippines, who

are said to work better than the natives here. The luggers are mostly built in Australia or the Straits, and have 6 to 20 tons register.

Besides mother-of-pearl shells, there are also found in this archipelago cheaper varieties, which are caught exclusively by natives and used in Germany and England for button manufacture, etc.

Of flores shells (alias bunda, or black-edged shells), there is an export of about 80 to 100 tons yearly. Prices here have successively advanced from £24 1s. (\$120) to £80 1s. (\$400) a ton. Green snail shells are exported to the extent of at least 100 tons yearly, valued at £25 1s. to £30 1s. (\$125 to \$150) a ton. Exports of mussel shells amount to about 30 to 50 tons yearly, valued at £20 1s. to £30 1s. (\$100 to \$150) a ton.

CASTOR-OIL PLANT IN INDIA.

This report is made at the request of parties in the United States who are interested in the cultivation of the castor-oil plant and the manufacture of castor oil.

The castor-oil plant is cultivated throughout India, and the oil is frequently employed by the Indian dyers as an auxiliary in certain dye preparations. This oil has the reputation of being one of the best for dressing tanned hides and skins. The uses of the oil are many, it being the only suitable one for lubricating all sorts of machinery, clocks, watches, etc. It is the best lamp oil they have in India and gives an excellent white light, with but little soot—almost an imperceptible amount—which quality no other oils possess. Its use as a medicine is too well known to require more than mere mention.

Though of considerable value as a manure, from the high amount of phosphates it contains, the castor-oil cake is regarded by European cattle breeders as highly injurious to cattle; but in India, a decoction prepared from the cake is given to buffalo cows to increase the flow of milk.

The oil is usually extracted from the seed in two ways—by decoction and by expression.

The process of decoction consists in bruising the seeds, previously deprived of the husks, and then boiling them in water; the oil rising to the surface is skimmed off and is afterwards again boiled with a small quantity of water to dissipate the acrid principle. To increase the product, the seeds are sometimes roasted, but this makes the oil brownish and acrid.

By expression, the seeds, after being thoroughly cleansed from the dust and fragments of the capsules with which they are mixed, are conveyed into a shallow iron reservoir, where they are submitted to a gentle heat. The seeds are then subjected to long-continued pressure by hand screws. The oil is transferred to iron boilers, con-

taining a considerable quantity of water, and boiled for some time, the impurities being skimmed off as they rise to the surface. The clear oil is then carefully removed and the process is completed by boiling it with a small quantity of water.

There are two chief forms of the plant in India, of which there are many varieties. One form is a tall bush, a perennial, that yields a large seed and an abundance of inferior oil. The second is an annual plant, sometimes grown as a pure crop, though more frequently in rows of a field containing other crops. It yields a small seed, the better qualities of which produce the superior oil of commerce and of pharmacy. The oil obtained from the first plant is largely used for illuminating purposes, but it also finds a place as lubricating oil and for many of the industries of Europe, where the more expensive article would be prohibitive in price.

The method of cultivation varies little in the different districts.

The best soil for the cultivation of the plant is red loam, though it grows well on alluvial soil. The land is plowed (in May and June) twice with the ordinary native plow that hardly scratches the top of the ground. It is then well manured and plowed again. In July or August, after the rains begin, the sowing takes place. A man sowing follows the plow and drops the seed at intervals of about a foot, and another plow follows, covering the seed. The seeds germinate in about a week, and a month later the land is plowed twice to kill the weeds. In the fourth or fifth month after sowing, the flowering begins and the capsules are formed. The picking begins in the seventh month and ends in the ninth. The seed pods are gathered by hand, stacked, covered with straw, and weighted. After six days, the capsules become soft and rotten. They are then exposed to the sun for two days, and when thus dried are beaten with a heavy mallet about 2 feet long and $1\frac{1}{2}$ feet broad, which removes about half of the seed. The remaining capsules are again dried, and the beating process is repeated, which results in the husking of the balance of the seed. The whole is then cleaned and is ready for the next process—that of extracting the oil.

When grown with other crops, the small variety is sown by driving a plow at pretty wide intervals over the field after the other crops have been put down; the seeds are sown about a yard apart. The product is less than that of the large description, though its value is said to be 50 per cent higher. The oil of the small kind only, as a rule, is used for medicinal purposes.

The average estimated outturn per acre is 475 pounds of clean seed, the highest 885 pounds (which is the outturn when grown as a single crop), and the lowest 235 pounds (when it grows with other crops).

The average estimate of cost of cultivation is \$3.25 per acre, the highest \$5, and the lowest \$1.75.

The average estimated profit per acre is \$5, the highest \$8.75, and the lowest \$4.25, though it is believed that the growing of the castor-oil plant could be made much more profitable than these figures indicate.

R. F. PATTERSON,
Consul-General.

CALCUTTA, *April 18, 1899.*

PRIZES FOR HEMP MACHINERY IN NEW ZEALAND.

Referring to my previous report on hemp-working machinery in New Zealand, published in CONSULAR REPORTS No. 225 (June, 1899), p. 332, I have to say that the last mail from the United States inundated this consulate with letters from all parts of our country, inquiring for further information on the subject. It being an impossibility to answer each individual letter, I suggest the advisability of publishing, as fully as possible, in the American press, the annexed "official notice" recently gazetted by the Minister for Agriculture, Wellington, in order that American inventors may be afforded an opportunity to cope with inventors of other countries in perfecting a machine or process which will successfully treat the native flax of New Zealand.

The notice reads:

BONUS NO. I.

A bonus of £1,750 (\$8,516) is offered for a machine or process for dressing New Zealand hemp (*Phormium tenax*) which shall be an improvement on the machines or processes now in use, and which shall, after trial, be found to materially reduce the cost of production, improve the product, or increase the quantity of dressed fiber.

The following are the conditions:

(1) All applications for the bonus must be sent addressed to the Honorable the Minister for Agriculture, Wellington, and must reach him not later than the 31st of March, 1900. Each application must be accompanied by a description of the machine or process, particularly stating improvements on present machines or processes, and also the cost at which the machine or process can be supplied.

(2) The applicants must be prepared to submit their machines or processes to examination at such time and place as the Government may direct.

(3) The Government shall appoint a committee of three or more experts, to whom all applications shall be submitted. Such committee shall, after perusal, state what machines or processes they deem worthy of consideration, and may inspect the same at any place within the colony; and, having so inspected the whole or any of them, may direct that the whole or any of them be brought for further trial to such place as they may think fit.

The cost of bringing the machines or appliances on to the ground, from within the colony, supplying the necessary shafting, motive power, and buildings, to be

defrayed by the Government. If any machine sent from beyond the colony is awarded the bonus or part thereof, then the cost of bringing such machine shall be borne by the Government.

The following shall be the basis of the test:

The committee shall supply a sufficient and equal quantity of green hemp to each machine or process as a test.

The committee shall take into consideration—

The time occupied by each machine or process in the operation.

The cost of labor and time required after the fiber has left the machine or process before it is ready for baling.

The percentage of dressed fiber and tow produced by each machine or process.

The cost of producing the same.

The cost of the machine, and the simplicity and durability of the working parts.

On completion of the tests, the committee shall furnish a report to the minister on all the machines or processes which they have examined or tested, and shall state—

(1) The machine or process which they consider on the whole the most efficient and economic.

(2) Whether they consider that any machine or process tested so materially reduces the cost of production or improves the product as to be worthy of the whole bonus or of a part only.

(3) Whether, in the event of no one machine or process being entitled to the whole bonus, they deem any machine or process worthy of a part of the bonus; and, if so, how much.

BONUS NO. 2.

A bonus of £250 is offered for a process of utilizing the waste products of the hemp.

The first three conditions of bonus No. 1 to apply to this also.

The committee shall supply a sufficient and equal quantity of the waste products to each process as a test.

On completion of the tests the committee shall report to the minister, and shall give the following particulars of each process:

(a) The nature of the article made.

(b) The quantity produced and the cost of production.

(c) The value of the product.

(d) Whether any of the processes are of sufficient importance to warrant the minister in giving (1) the whole, or (2) any part, of the bonus; (3) if a part only, how much.

FRANK DILLINGHAM,
Consul.

AUCKLAND, *May 18, 1899.*

AGRICULTURE AND LIVE STOCK IN NEW SOUTH WALES.

Mr. Coghlan, the Government statistician of New South Wales, has issued a few pages of what he terms "preliminary tables," arranging in extensive columns statistical facts relating to the chief industries of this colony, bringing the figures down to the close of 1898. I abstract the following information:

While New South Wales is by no means exclusively a pastoral
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country, the pastoral interests are of such dominant importance that there can be no prosperity in the colony with that industry depressed; and as this is a land of erratic seasons, the prosperity of the country is of course a matter of great uncertainty.

As this colony is to some extent a competitor with the United States, and as we have a growing market here for a large variety of our products, our people must feel an interest both in the surplus and the purchasing power of the community. Conclusions regarding such affairs may reasonably be formed from a knowledge of the magnitude of the operations, and I submit the following as interesting facts.

AGRICULTURE.

As an agricultural country, New South Wales is steadily increasing, as the following table shows:

Area of land under principal crops during each of the five years ended March, 1899.

Crop.	1895.	1896.	1897.	1898.	1899.
Grain crops:	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Wheat	647,483	596,684	866,112	993,350	1,311,496
Maize	208,308	211,104	211,382	209,588	206,363
Barley	10,396	7,590	6,453	5,151	4,454
Oats	30,636	23,750	39,530	28,605	19,817
Rye	879	753	1,487	2,032	2,003
Millet	1,115	865	621	897	681
Hay crops:					
Wheat	125,797	172,614	161,136	213,720	310,069
Barley	953	1,744	1,615	1,509	1,438
Oats	96,856	120,857	133,946	152,598	114,898
Lucern	21,637	24,081	30,512	33,246	32,725
Green fodder.....	53,029	66,833	74,472	61,801	67,166
Miscellaneous crops:					
Potatoes	30,089	24,722	31,170	23,816	27,974
Tobacco.....	716	1,231	2,744	2,181	1,405
Sugar cane—					
Cut.....	14,204	14,398	18,194	12,936	14,578
Not cut.....	18,705	18,529	12,859	12,929	10,181
Grapevines—					
Wine-making	4,475	4,390	4,608	4,490	4,580
Table use.....	2,358	2,487	2,693	2,649	2,595
Not bearing.....	744	642	760	944	903
Orangeries—					
Productive.....	9,242	8,759	8,359	10,097	10,485
Not bearing.....	2,962	3,197	4,130	3,846	3,902
Other fruit—					
Productive.....	21,465	20,635	24,031	23,965	24,551
Not bearing.....	8,258	8,145	8,524	7,054	7,175
Market gardens.....	6,542	6,899	6,824	6,384	7,013
All other crops.....	9,115	7,691	7,555	8,041	9,217
Total under crops.....	1,325,964	1,348,600	1,659,717	1,821,820	2,195,660

To the American readers, especially those informed in farming industries, some peculiarities in these tables will appear.

It will be observed that the chief increase in the agricultural area is in one crop—wheat; the character of the “hay” crop is also worthy

of note. It will be observed that over one-fifth of the acreage of wheat sown is used for hay, that almost all the hay is made of what we call "small grain," and that grass cuts a very small figure in the hay crop. As a fact, with the exception of alfalfa (lucerne), there is practically no "tame" or artificially sown grass raised in Australia. There is no timothy, no redtop, no blue grass, and, as there are no bumble bees, there is no red clover grown in Australia. Why so little millet is raised I am not able to learn, for in our country this crop is fairly well adapted to dry soil and dry seasons.

The following table shows the number of bushels of grain raised during the seasons noted above:

Crop.	1895.	1896.	1897.	1898.	1899.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Wheat	7,041,378	5,195,312	8,853,445	10,560,111	9,235,647
Maize	5,625,533	5,687,030	5,754,217	6,713,060	5,378,738
Barley	179,348	96,119	110,340	99,509	64,060
Oats	562,725	374,196	834,633	543,946	283,249
Rye	13,315	8,078	22,000	26,145	23,983
Millet	12,460	9,725	7,627	13,071	11,244

This table shows that the increase of the crop or output of wheat has not kept pace with the increase in acreage.

While liberalizing the land laws has done much to improve the agricultural industry of the colony, I incline to regard the unfavorable effects of the droughts during the last few years on the pastoral industry as a contributing cause.

GRAZING.

The havoc played with Australia's chief industry by the succession of droughts of the last few years has been appalling. A few years ago, New South Wales had nearly one-eighth of the sheep of the globe, and in value her annual wool crop exceeded all her other products combined. Now her proportion of the world's sheep is about one-thirteenth.

The following table tells the story better than any words of mine:

Number of live stock at end of each year, 1891-1898.

Year.	Horses.	Horned cattle.	Sheep.	Swine.
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
1891.....	469,647	2,128,838	61,831,416	253,100
1892.....	484,309	2,221,459	58,080,114	249,520
1893.....	493,231	2,269,852	56,980,688	240,860
1894.....	518,181	2,465,411	56,977,270	273,359
1895.....	487,943	2,150,057	47,617,687	223,597
1896.....	510,636	2,226,163	48,318,790	214,581
1897.....	498,034	2,085,096	43,952,897	207,738
1898.....	488,504	2,015,015	40,147,603	273,901

While in her chief source of income and the chief means with which to purchase imports (wool) New South Wales has lost, since 1891, almost 22,000,000 head of sheep, in other live stock she has hardly held her own.

Although these statistics speak discouragingly for the immediate future of the colony, it must not be thought that the country is struggling under an overmastering depression, for, in fact, so great is the vitality and wealth and energy of the people that the business of this country, as a whole, can be justly said to be fairly prosperous, and there is no indication of industrial paralysis.

The indications now are that the long-continued drought has broken, at least in a large portion of the colony, and already there is a more hopeful feeling in business and industrial circles.

GEO. W. BELL,
Consul.

SYDNEY, *April 15, 1899.*

WHEAT, FLOUR, AND CANNED MEATS IN SOUTH AFRICA.

I have recently been investigating the competition offered by Australia with some of our American products—namely, wheat, flour, and canned meats. I trust the following information will be of benefit to our exporters.

WHEAT.

The following prices rule to-day in Cape Town:

Description.	Prices.	
	<i>s. d.</i>	
Tasmanian, cargo lots by sailing vessel.....	11 10	\$2.83
Australian, cargo lots by sailing vessel.....	12 3	2.98
Californian, cargo lots by sailing vessel.....	12 1	2.94
Red winter (United States), parcels by steamer.....	15 9	3.83
Hard spring (United States), parcels by steamer.....	16 0	3.89

These figures are per bag of 200 pounds, c. i. f. afloat in Table Bay. Duty and charges amount to 4s. 7d. (\$1.11) per bag, and this, added to above figures, gives the landed cost in store. Cape Colony wheat sells at 18s. (\$4.33) per bag of 200 pounds.

A cargo of Australian wheat amounts to about 15,000 bags of 200 pounds each, and at the present time the freights being paid by sail are from 25s. to 26s. 6d. (\$6.08 to \$6.45) per ton of 2,240 pounds. A cargo of Californian wheat runs from 25,000 to 35,000 bags of 200 pounds, and freights at present are from 20s. 6d. to 22s. 6d. (\$4.99 to \$5.47) per ton of 2,240 pounds.

Steam freights from Australia can hardly be quoted, there being no fixed rate. The great bulk is brought by sailing ships, and steamers carry it only when they have space to spare, or perhaps on a special "hurry order." A figure would be from 30s. to 37s. 6d. (\$7.30 to \$9.12) per ton of 2,240 pounds. A line just established offers 25s.

Steam freights from New York to Cape Town are at present 34s. 4½d. (\$8.36) per ton of 2,240 pounds.

Spring and winter wheats are not, however, imported in the same large quantities as either the Australian or Californian, and are seldom used ground in a straight winter or spring flour. They are employed almost entirely for blending, imparting a strength to the flour not possessed by the Australian or Californian wheats.

The contention of the millers here is that Californian wheat gives a flour of no strength and needs blending with spring. This applies also to some Australian wheats, but others are ground alone. Cape Colony wheat is ground by itself and makes an excellent flour.

FLOUR.

Australia is now offering the finest roller flour at £6 (\$29.20) per ton f. o. b. Melbourne. Rates of freight by either sail or steamer would be the same as on grain. The above price would therefore figure out almost £8 (\$38.93) c. i. f. Table Bay. To secure a grade of flour equal to this from New York, £10 10s. to £11 (\$51.10 to \$53.53) would be the figure c. i. f. Table Bay.

CANNED MEATS.

The prices recently asked for Australian corned, roast, or boiled beef or mutton in 1-pound tins has been 3s. 8d. (89 cents) per dozen, and 2-pound tins 6s. 3½d. (\$1.53) per dozen, both first cost, f. o. b. steamer. At the same time, the price asked for "Libby, McNeal & Libby" (United States) beef was: For 1-pound tins, \$1.15 per dozen; 2-pound tins, \$2.10 per dozen—f. o. b. New York. This shows a difference in favor of Australian of 26 cents per dozen on the 1-pound and 57 cents per dozen on the 2-pound tins. This class of goods is usually carried by the steamers, and the rate of freight from Australia just now is £2 5s. (\$10.94) per ton of 40 cubic feet. There is, however, a new line of steamers which offers the rate of £1 15s. (\$8.52).

From New York, the freight is £1 13s. (\$8.03) per ton of 40 cubic feet.

The quality of the Australian meats seems to give entire satisfaction, and the packers are making every effort to push their goods, to

keep up to date, and, if possible, to improve them. They have obtained such a foothold that in a contract now under consideration the tenders call for 50,000 pounds of American tinned meats and 100,000 pounds (double the quantity) of Australian.

CAPE TOWN, *April 27, 1899.*

JAMES G. STOWE,
Consul-General.

AMERICAN MANUFACTURES IN THE SOUTH AFRICAN REPUBLIC.*

PIANOS AND ORGANS.

The climate here is a little hard on these instruments, owing to the difference in the seasons. The summers are warm and wet and the winters cool and dry, rain seldom falling from the 1st of May until the 1st of November. The temperatures, however, are remarkably equable during the respective seasons. Cases and actions should be made to withstand not so much the different temperatures as the differences in humidity. In summer both cases and actions swell on account of dampness, and in winter they contract and warp. During the winter season, also, there are severe dust storms, and it is impossible to keep the fine sand and dust from entering the houses. This has a detrimental effect on pianos and organs that are not built tight enough to keep out this element of destruction.

The style of pianos most salable are uprights of a rather low grade, but there is also a market for some pianos of a much better class. Organs of medium prices are most salable.

In number of sales, German makes have a long lead, English and American following in the order named. In point of excellence, it is admitted on all sides that the American makes show great superiority over all others; but they are too high priced for the trade, and consequently comparatively few are sold. Those handled in this market are the following:

Pianos—Steinway, Collard & Collard, C. Bechstein, John Broadwood & Sons, C. Gunther & Son, Gors & Kallmann, Carl Ecke, E. Sponnagle, B. Squire & Son, J. & J. Hopkinson, J. Bluthner, and C. Mand.

Organs—Mason & Hamlin, Estey, Fort Wayne Organ Company, Kimball, Needham, Packard, Dominion Company, Cornish Company, Palace Company, and W. Sauer.

Pianos of the above makes sell for 50 to 200 guineas (\$253 to

*In reply to an inquiry from the director of the Philadelphia Commercial Museum, to whom an advance copy has been mailed.

\$1,022); organs, from £13 (\$63) upwards. Veneered cases are principally sold on pianos, and the preference as to tone, of course, varies; a full and strong tone with a light touch is, I think, generally preferred.

Among the dealers in pianos and organs, I may mention the following: Hoyer & Bock, Mackay Bros., and P. van den Burg, of Pretoria; and I. F. Hurst, Mackay Bros., and Thos. C. Litchfield, of Johannesburg. The German and English manufacturers extend to the dealer here a term of credit averaging about four months from receipt of goods, and it seems useless for American manufacturers to attempt shorter terms. If, however, the American firms who make moderate and lower priced instruments send their representatives here, with proper prices and terms, to sell direct to the dealer, I see no reason why they should not have their share of the business, which amounted in 1898 to nearly £25,000 (\$121,663) in imports into the Republic.

HARNESS AND SADDLERY.

The following was given me by the largest harness maker here:

The various styles and patterns required for each market may be classed as "farming," "boer," "high-class English," and "native." However, in all harness lines, the breast-collar pattern is the most popular, and the mounts vary according to quality.

Saddles.—Semimilitary form a fair proportion, but in these goods no two colonies here import the same styles.

Retail and wholesale prices.—In the Transvaal prices are: Saddles, £1 15s. (\$8.52) wholesale, £1 17s. 6d. (\$9.13) retail; harness, handmade, for pair of horses, £4 17s. 6d. (\$23.74) wholesale, £5 (\$24.33) retail.

Cheap native labor and successful Cape tanneries, supported by a cattle-growing country, make foreign competition in cheaper lines impossible, while high-class goods are well handled by English, French, and German makers.

American lines are all made for fine roads peculiar to America, and must be made to suit our "so-called roads" before they become popular goods.

PATENT MEDICINES.

This is not an unhealthy country, but at the same time there is a sale for many medicines that have become popular in the United States; in fact, I see advertisements in the newspapers every day of patent medicines that have a very familiar look to one accustomed to reading the American papers. Such remedies as "Ayer's Cherry Pectoral," "Carter's Little Liver Pills," "Williams's Pink Pills," "Cuticura," "Castoria," "Condy's Fluid," etc., are advertised in all the papers and handled by all the druggists, as a rule.

Malarial, typhoid, and enteric fevers, pneumonia, smallpox, leprosy, diphtheria, dysentery, and rheumatism are the most common

diseases; hence drugs for these ailments would be the most commonly sold.

Of course, the drug and patent-medicine trade requires the greatest amount of business tact in the advertising and introduction of goods, and in these matters our American manufacturers have proven themselves wonderful adepts elsewhere. Should they prove their skill equally well in this field, they could unquestionably reap a rich reward. I know of no restrictions imposed by the Government on any drugs or patent medicines of American manufacture.

CHAS. E. MACRUM,

PRETORIA, *April 26, 1899.*

Consul.

THE BICYCLE TRADE IN CANADA.

From the tables of the trade and navigation of the Dominion of Canada for the year ended June 30, 1898, recently issued, may be gathered some data of interest to the manufacturers of bicycles in the United States. The total number of bicycles sold in Canada during the year is estimated at 50,000, of which 27,262 were imported from the United States and 46 from Great Britain. In addition to this large importation of complete machines, the value of bicycle parts imported was \$279,752 (of which the United States furnished \$271,175), which is held to represent 12,000 complete machines at \$27 each. In round numbers, the total of imported bicycles sold, complete or in parts, was 40,000, averaging in cost \$22.20, on which a duty of 30 per cent was assessed and \$179,259 collected, while on bicycle parts the duty collected was \$83,534.

In 1897, the importation of completed bicycles was 24,558, or 2,750 less than in 1898. The average cost in 1897 was \$32.40, against \$22.20 in 1898; and the duty, per machine, \$9.72, against \$6.66. These figures show that as the American manufacturer decreases the cost, the demand increases.

During the year ended June 30, 1898, 18,617 bicycles were manufactured in Canada, of which only about 10,000 were sold at home. While the United States was encroaching on this market, Canadian manufacturers were reaching out for the trade in foreign countries, and sold 8,617 bicycles for \$373,383, Australia taking 5,229, Germany 1,441, Great Britain 616, France 490, and the United States 307, as their largest customers.

The prices seem to have been varied for each country, as follows: Great Britain and Australia, about \$46; France, about \$41; United States, about \$35; Germany, about \$30.

The indications at this writing (May 10, 1899) point to the early organization of a trust among the bicycle manufacturers in Canada. Several wealthy capitalists of this city are interested, and it is thought that such an organization will result in closing the small factories and concentrating the manufacture at Hamilton and Toronto. The proposed capital is placed at \$3,000,000, of which \$2,000,000 is to be taken in preferred stock at 7 per cent.

JAS. M. SHEPARD,
Consul.

HAMILTON, *May 10, 1899.*

MINING AND TRADE IN BRITISH COLUMBIA.

VANCOUVER ISLAND.

The development of the mineral resources of Vancouver Island has been pushed during the past year with more energy than heretofore, largely by United States capital. A movement is on foot for the provincial government to establish a telegraph line along the west coast of the island, from Alberni to Clayoquot and Uclulet sounds, a distance of 300 miles, connecting with Nanaimo and Victoria and the whole telegraph system.

A ninety-nine-year lease on the Copper Island group of mines on Barclay Sound, containing seven claims, and a similar lease on the Trilby and Lucky Lamp groups on Rivers Inlet have been secured by American citizens. It is the reported intention to establish blast furnaces, steel mills, and tin-plate works near Port Angeles. A large percentage of the tin plate manufactured in the United States comes to the Pacific coast for the fruit and salmon canneries, but the supply is not equal to the demand, a large quantity being received from Great Britain.

At a public meeting recently held in Tacoma in the interests of mining, Col. F. M. Ashton, a mining engineer and capitalist, made the following statement:

On the west coast of Vancouver Island, on Clayoquot Sound, Alberni Canal, and Nootka Sound, there are exceedingly rich properties in copper and other minerals. Copper ores are being sought by heavy investors, and these mines will not escape their eyes. All of this mineral country on Vancouver Island is naturally tributary to Tacoma. The ores are low grade, but water transportation furnishes cheap means of getting to the smelter, and right here in Tacoma is the natural place to treat the ores.

An American company is also largely interested on Clayoquot Sound, where copper and iron have been developed; also small quantities of gold and silver. Much of the ore is shipped to Tacoma, while some is purchased in Victoria and shipped around the Horn

to Swansea, Wales. Other properties of the same company are the Helga and Good Hope. They are located on Trout River and Disappointment Inlet. The Helga is made up of four claims of low-grade ore. This is not shipping ore and will require a mill on the ground. A contract has been let for a 25-foot tunnel. The Good Hope group has six claims. Contracts have been let for a tunnel 24 feet and two shafts, one 66 and the other 25 feet.

On Quatsino Sound, men are at work on what is known as Queen, King, Tuscarora, and Superior claims, said to possess valuable properties.

An important mine owned by American capital and managed by G. H. Hayes, of Tacoma, has developed on Barclay Sound, near Alberni, from which several shipments have been made to Tacoma. Recently, a separate and distinct chute of rich ore was struck 120 feet west of the body of ore on which the company has been at work. The new chute shows for 300 feet on the surface. So far, the company has shipped 300 tons of ore from the mine, and the smelter returns have been most satisfactory. As soon as the weather settles, a tramway will be built, and then a steamer will carry the ore from the mine to the smelter.

The returns from the coal mines on Vancouver Island show that the product during the years 1897 and 1898 was as follows:

Company.	1897.	1898.
	<i>Tons.</i>	<i>Tons.</i>
New Vancouver Coal Co.....	319,277	520,222
Wellington Coal Co.....	232,255	315,738
Union Coal Co.....	246,926	236,395
Alexandria Coal Co.....		45,560
Total.....	789,458	1,118,915

OYSTER HARBOR.

The extension of the Wellington mines, located a short distance from the old collieries, but including a portion of the same seam or vein of coal, has been under way for the past year. During that time, a tunnel $1\frac{1}{2}$ miles long has been run in the Alexandra Mountain which strikes the coal at a depth of 600 yards and opens out sufficiently to give an output of 3,000 or 4,000 tons of coal per day. The vein appears to be inexhaustible.

This mine will be equipped with the most modern electric machinery, will be lighted by electricity, and the coal taken from the mine to the depot by electric locomotives. The contract for this plant has already been let to a local firm. The electric tram line will be nearly 5 miles in length and operated by two 150-horsepower

generators of the most approved type, directly connected with automatic, high-speed, horizontal engines, also of 150 horsepower each. This plant also includes two standard mining locomotives, specially constructed and very powerful, each of 100 tons capacity.

From the electric road the coal will be carried 13 miles on a standard-gauge railway to Oyster Harbor, which will, after July 1, be the point of shipment, instead of Departure Bay, as heretofore. A portion of the Esquimalt and Nanaimo Railway is used to make this transfer, but it was necessary to build 6 miles additional of tracks, which are now completed, 500 men having been employed during the past few months. At Oyster Harbor, 6 miles north of Chemainus, on the east coast of the island, bunkers of 10,000 tons capacity have been erected, as well as two large wharves, where ocean vessels of the largest class can load 800 tons per hour at low tide.

The total outlay on these improvements reaches a trifle over \$1,000,000, which is all expended by Dunsmuir & Sons, of Victoria, the owners of the mines and of the island railway, who employ over 2,000 men constantly. The ties and lumber come from the mill at Chemainus, the cars are built at the Albion Iron Works, of Victoria, the iron for the rails comes from England, and the locomotives from the United States. Five hundred men are now at work in this new Wellington mine, and it is expected that the number of operatives will be increased to at least 1,500 within the next two years.

VICTORIA.

The receipts of inland revenue at the Victoria office for 1898 were \$242,269.09, a decided increase. The collections were made on the following articles: Spirits, \$170,920; malt, \$20,648; tobacco, \$38,172; raw leaf, \$1,837; cigars, \$10,064; petroleum, \$194; other receipts, \$626.

Victoria customs collections for the year ended December 31, 1898, were the largest on record. They were 25 per cent larger than for the previous twelve months. An increase in revenue is derived from the Chinese tax, over 500 more Chinamen having entered the country than in 1897. The exports also show an increase. Comparison of the last two years' revenue shows the following figures: In 1897, \$733,440; 1898, \$980,880; increase, \$247,440.

The Alaskan trade had a very favorable effect on the shipbuilding industry of Victoria, for of the 22 steamers built in 1898 in the Province of British Columbia, no fewer than 12, with a tonnage of 4,944 tons, were built in Victoria. The majority of these were steamers for the northern rivers. Besides the building of steamers,

there was a great deal of work done here in refitting and repairing vessels, on which \$44,000 were expended. The shipping trade of the port of Victoria shows an increase over 1897, the number of vessels entering and clearing during the last year being 5,458, against 5,023 in 1897.

The appropriations this year for Victoria by the Dominion of Canada include \$7,000 for wharves and other improvements at the quarantine station, \$10,000 for the improvement of south channel in the Nanaimo Harbor, and \$30,000 for the works at Esquimalt Harbor and the naval station.

NANAIMO.

Considerable improvement has taken place in this city during the past year, due to the phenomenal increase in the quantity of coal shipped, which has induced miners to move here and bring their families. The total population is now about 4,500.

The output of coal during 1897 amounted to 319,277 tons and last year to 520,222 tons, an increase of 200,945 tons. During the same time, the foreign shipments increased from 233,349 tons in 1897 to 403,535 tons in 1898. This coal was shipped in 157 steamers and 23 sailing vessels, of which but 12 were of American register, although of the coal shipped 335,025 tons went to United States ports.

During the past-year, the New Vancouver Coal Company increased its storage capacity in this city 8,000 tons. It also erected a new loading wharf, fitted with improved steam machinery that can load 6,000 tons of coal in twelve hours. A separate wharf is now being constructed with the same machinery, so that two ocean steamers can hereafter be loaded at the same time. The mines are lighted and motive power furnished by electricity from the company's own plant, consisting of two dynamos. All the electric plant is of American manufacture, as are also the air compressors used in the mines. A new compressor and 100 tons of rails have just arrived from San Francisco to be placed in the mines. All of the new machinery, wire rope, and six locomotives are of American manufacture. The company is also a large importer from the United States of bar iron, steel, and iron pipe. One thousand two hundred and sixty men are employed by this company, all white except 160 Chinese.

The New Vancouver Coal Company has started to sink a shaft on the northeast side of Newcastle Island, Nanaimo Harbor, which will connect with the present workings at Protection and Newcastle islands. The shaft will be sunk about 350 feet to the coal, which was found by the bore to be of satisfactory thickness and quality. The company will prosecute the work continuously by the employ-

ment of three shifts until the coal is reached. The sinking of this shaft will materially increase the facilities of the company for the output of coal, and the record of 2,600 tons a day will, it is said, be eclipsed by a production of 3,000 tons.

A sawmill is in process of erection, in connection with the sash and door factory, which is expected to have, when completed, a capacity of 75,000 feet per day and give employment to 140 men.

A small boot and shoe factory, which employs 7 men and makes heavy shoes for miners, loggers, and prospectors, has recently been started. The present output is about 600 dozen pairs per year and is increasing. American sewing machines are used; also oak and sole leather from the United States.

WELLINGTON.

A population of 2,000 is gathered around the Wellington collieries. The machine shops and terminus of the Esquimalt and Nanaimo Railway are also located at this point. A narrow-gauge railway runs 4 miles east to Departure Bay, where the shipping wharves are situated. In 1897, the output was 232,642 tons and the foreign shipments 188,139 tons. Last year, the output was 315,738 tons and the foreign shipments 232,642 tons. Of the exports for 1898, 220,118 tons were shipped to the United States, being carried by 194 steamers and 39 sailing vessels, of which 82 were of American register, including 40 steamers plying between Puget Sound and Alaska. These mines are reported now to be nearly exhausted, but there are 300 acres of good coal land adjoining them on the north, where the extension heretofore alluded to is located.

CHEMAINUS.

The Victoria Lumber and Manufacturing Company, composed almost wholly of United States capitalists, has the most extensive mills in the Province, located at Chemainus, on the east coast of Vancouver Island, 52 miles north of Victoria, on the line of the island railroad. It is under the management of Mr. E. J. Palmer, with Mr. Samuel Herd as superintendent.

This company has over 150,000 acres of woodland, and 100,000 acres have not yet been touched. The capital is \$750,000, 90 per cent of which is American. The mills were constructed six years ago, but have not been in full operation more than three years. In the mills are employed 160 men, and 60 additional men are given constant employment on the adjacent grounds and for loading ships. The mills are equipped with all the modern improvements and turn out 500,000 feet per day of twenty hours. Last year, the output was 35,000,000 feet, which was loaded at the wharves in deep-sea

vessels and shipped to various ports in Australia, South America, Africa, China, and Japan.

The company has built short lines of railroad to logging camps, equipped with locomotive and thirty flat cars. It also operates two steam tugboats of 100 tons each and six barges, each of the capacity of 250,000 feet of lumber.

Around the mill has grown up a population of 600. A United States consular agency is established here.

MINERAL OUTPUT.

Including all things mined, coal as well as gold, and all the metals, the output of British Columbia for the last nine years has been as follows:

Year.	Value.	Year.	Value.
1890	\$2,608,803	1895	\$5,643,042
1891	3,521,102	1896	7,507,956
1892	2,987,530	1897	10,455,268
1893	3,588,413	1898	10,906,861
1894	4,225,717		

LUMBER INDUSTRY.

The returns show that for the last year the lumber trade of British Columbia has been comparatively small. The shipments were: From Chemainus, \$160,351; Vancouver, \$102,919; Cowichan, \$9,300; Salt Spring Island, \$8,200; New Westminster, \$5,796; Moodyville, \$119,435—a total of \$606,001. Of this, \$176,303 went to Australia, \$75,303 to China, \$43,496 to South Africa, \$50,111 to the United Kingdom, \$43,288 to Mexico, and \$17,500 to South American points.

SALMON.

Compared with previous years, the British Columbia salmon pack for 1898 is small, as the following figures will show:

Year.	Quantity.	Year.	Quantity.
	<i>Cases.</i>		<i>Cases.</i>
1892	228,170	1896	601,570
1893	590,229	1897	1,024,371
1894	494,371	1898	539,468
1895	566,395		

HALIBUT.

The number of halibut in Alaskan waters is one of the most remarkable things on the coast. It is no uncommon thing for a little steamer to come into port with an immense cargo, caught in

a few hours. Last month, an American steamer passed this point on her way to Tacoma with 133,000 pounds of halibut caught off Hackett Narrows, on the Alaskan coast, in three and a half days by eighteen men, with hooks and lines, using nine dories. This cargo, worth at the lowest estimate 3 cents per pound, foots up \$3,960. They report that the water seems almost alive with halibut.

BRITISH NAVAL STATION.

The naval station at Esquimalt on this island, 3 miles west of Victoria, is the scene of a great deal of activity just now, the Admiralty having in course of construction a number of buildings and other improvements to the station. A large brick jail is being erected, 33 by 65 feet, two stories high, with walls of more than ordinary thickness. A storehouse of great capacity is also nearing completion. The Admiralty is constructing a wall 12 feet in height from the entrance to the naval dockyard across to the water, completely inclosing the point.

If the opinions of military men are to be relied upon, the force will be steadily augmented until the station assumes the proportions of a great naval depot, with large supplies of munitions of war. In addition to the engineers and garrison, it is expected that a battalion of infantry will, in two or three years, be stationed here. Quick-firing batteries are now in course of construction on three sides of the harbor, which will be mounted as soon as the guns arrive.

ABRAHAM E. SMITH,

VICTORIA, *April 29, 1899.**Consul.*

MINERAL PRODUCTION OF BRITISH COLUMBIA.

Under date of May 10, 1899, Consul Smith, of Victoria, sends the following official tables, showing the production of the various mines of British Columbia during last year and the preceding years of this decade:

Total production for all years up to and including 1898.

Articles.	Value.	Articles.	Value.
Gold:		Coal and coke.....	\$40,306,160
Placer	\$59,960,819	Building stone, bricks, etc.....	1,500,000
Lode.....	6,501,906	Other metals.....	26,500
Silver	9,676,901	Total	123,417,326
Lead	4,049,199		
Copper.....	1,395,841		

Amount and value of mineral products for 1897 and 1898.

Articles.	1897.		1898.	
	Quantity.	Value.	Quantity.	Value.
Gold:				
Placer	25,676	\$513,520	32,167	\$643,346
Lode	106,141	2,122,820	110,061	2,201,217
Silver	5,472,971	3,272,836	4,292,401	2,375,841
Copper	5,325,180	266,258	7,271,678	874,781
Lead	38,841,135	1,390,517	31,693,559	1,077,581
Coal	882,854	2,648,562	1,135,865	3,407,595
Coke	17,832	89,155	35,000	175,000
Other		151,600		151,500
Total		10,455,268		10,906,861

Yield of placer gold per year to date.

Year.	Value.	Year.	Value.
1890	\$490,435	1895	\$481,683
1891	429,811	1896	544,026
1892	399,526	1897	513,520
1893	356,131	1898	643,346
1894	405,516		

Production of lode mines.

Year.	Gold.	Silver.	Lead.	Copper.	Total value.
1887		\$17,331	\$9,216		\$26,547
1888		75,000	29,813		104,813
1889		47,873	6,498		54,371
1890		73,948	Nil.		73,948
1891		4,000	Nil.		4,000
1892		66,935	33,064		99,999
1893	\$23,404	195,000	78,906		297,400
1894	125,014	470,219	169,875	\$16,234	781,342
1895	785,271	977,229	532,255	47,642	2,342,397
1896	1,244,180	2,100,689	721,384	190,926	4,257,179
1897	2,122,820	3,272,836	1,390,517	266,258	7,052,431
1898	2,201,217	2,375,841	1,077,581	874,781	6,529,420
Total	6,501,906	9,676,901	4,049,199	1,395,841	21,623,847

Coal.

Year.	Quantity.	Value.
	<i>Tons.</i>	
1890	678,140	\$2,034,420
1891	1,029,097	3,087,291
1892	826,335	2,479,005
1893	978,294	2,934,882
1894	1,012,953	3,038,859
1895	939,654	2,818,962
1896	896,222	2,688,666
1897	882,854	2,648,562
1898	1,135,865	3,407,595

Coke.

Year.	Quantity.	Value.
	<i>Tons.</i>	
1895-96	1,565	\$7,825
1897	17,831	89,155
1898 (estimated).....	35,000	175,000
Total.....	54,396	271,980

Commercial Agent Shotts, of Sault Ste. Marie, under date of May 10, 1899, also transmits figures substantially the same as those above given showing the mineral product of British Columbia. He adds:

The report shows that the output of gold from placer mines has gradually decreased from \$3,913,563 in 1863 to \$643,346 in 1898.

GOLD MINING IN ALASKA: NOTES FROM THE KLONDIKE.

The gold fields in the Territory of Alaska at Forty-Mile, Eagle City, and Seventy-Mile districts are becoming more promising, and bid fair to rival any territory yet discovered for placer gold mining. The geological formation in the above-named districts is practically the same as that adjacent to Dawson.

Sections of the Forty-Mile district have been difficult of access; but since the location of a mining camp at Eagle City, prospecting parties having been sent out to examine the tributaries of Forty-Mile River, and good paying ground has been discovered during the past winter. Slade Creek, a tributary in the Eagle City district, has recently been found to contain much gold, and no doubt many other creeks will be found equally as rich. In the Forty-Mile district, American Creek, Chicken Creek, and Stonehouse Creek contain rich gold deposits, but the best in this district is Jack Wade Creek, which, from all indications, will equal any yet found, even in the Yukon district of Canada.

The gold belt of the Koyuk mining district, in the vicinity of Union City and Peavy trading post, Alaska, is also found to be as rich as Forty-Mile district, and more adapted to hydraulic mining. Circle City was almost deserted at the time of these discoveries, the miners stampeding across the country to the Koyuk, a long distance. From Rampart City, the trip was only 200 miles and the trails were in a good condition. The ground where gold has been found in the

Koyuk district is reported not so frozen as in the Klondike, and is therefore easier to work.

It is surmised that Alaska will exceed the Canadian Yukon in gold output in a few years, if properly developed. It covers more gold-bearing territory and the gold so far discovered is evenly distributed, not being in pockets, as is the case on many creeks in the Klondike district, where one claim may be rich and the adjoining one worthless.

The miners in United States territory have different regulations for each district—for instance, on American Creek the miner is allowed a 1,320-foot claim as per United States statutes; while on Wolf Creek, adjacent, the miner is allowed only a 500-foot claim; on Jack Wade Creek, 1,000 feet is the length allowed.

Staking by illegal powers of attorney is practiced. The recorder, in order to get his fee of \$2.50, records for anyone making a statement. On Jack Wade Creek, many claims were staked by parties who were sent from Dawson with illegal powers of attorney. The miners held a meeting and declared that the staking by powers of attorney not properly authenticated before a notary public or recognized official was illegal. They afterwards declared the size of claims to be 1,320 feet, instead of 1,000 feet as first determined. At still another meeting, it was put on record that the powers of attorney previously declared illegal were thereafter to be considered legal.

It would be well if all the districts in Alaska could be governed by a uniform law, as local regulations often change the size of claims, etc. These conditions permit a miner to locate and record a claim on all the creeks, which would appear to operate against the welfare of the country. As it is now, if the owner of a claim is called away to visit his home in the United States, his claim may be divided during his absence by a miners' meeting.

With a United States land office at Circle City and one at Eagle City to cover the territory from Fort Yukon to the Canadian frontier, and another in the Koyuk district, conditions would be improved.

A sanitary inspector and a health officer have been appointed, and Dawson City is to be drained. There has been an overstock of fresh meat this winter—beef killed in the fall and kept frozen. Moose meat has been brought in in large quantities by the Indians, which has helped to keep the price of beef down. This month caribou meat has been coming in, and a few mountain sheep. Otherwise, provisions have remained at the high price prevailing all winter. Felt shoes are the recognized foot wear for this country and Alaska, at least from October to April. They are warmer and far superior to the old-fashioned Indian moccasin. All that were brought in last year were

readily sold at \$10 per pair. These shoes should not cost to manufacture more than \$1.50 to \$2 per pair.

The mail service leaving Dawson twice a month has been excellent. The average time to Skagway is fifteen days; the trip was made once in ten. The mail service coming into Dawson has been wretched; on the 1st of March, the mail of September, 1898, was received. During the month, there has been such an accumulation of mail that the post-office has been alternately closed for two days to sort the mail, then opened for two days for distribution. A great disappointment has been the utter failure to deliver second-class matter. New York and Philadelphia papers came in for the first time about a month ago and found a ready sale at \$1.50 a copy.

The quickest route for persons coming into Alaskan territory for prospecting at Forty-Mile, Eagle City, or Seventy-Mile is by the pass, then by boat from Lake Bennet through Dawson. The bulk of freight for Dawson will, of course, come up the Yukon. The upper river from Dawson to head of navigation will be better supplied with boats this year than last, and it is to be hoped freight rates will be reduced. On the lower river, from St. Michaels to Dawson City, the Alaska Exploration Company will have six river steamers and five barges; the Empire Line, four river steamers, one steam tug, and half a dozen barges; the Alaska Commercial Company, eight river steamers, two others chartered, and eight barges; the National Trading and Transportation Company, six river steamers; the Columbia Navigation Company, two river steamers; the Seattle-Yukon Transportation Company, three river steamers and three barges—all of which have accommodations for both freight and passengers. Some of the new steamers are fitted up as luxuriously as any river steamers in the United States. There are some fourteen steamers frozen up in the Yukon, and it is feared that when the ice breaks up, it will carry the boats with it. Some of the companies will run small steamers with supplies up the Koyuk River, as many people will remain in that section another winter.

The thawing machine has proved a great labor-saving device, and is much more economical than the old method, burning far less wood. The thawing machines so far consist of a boiler of, say, 10 horsepower, a small engine, and piping. There will be a demand for all brought in.

Claims are cheap on the market to-day, owing to the scarcity of money. A good many prefer loaning their money at 10 per cent a month interest on good claims to buying the claims.

One is struck on visiting the miners' cabins for the first time by the apparent lack of consideration for comfort. One finds a 12 by 14 or 14 by 16 cabin, with two bunks at the end facing the door,

built to accommodate two or three persons for sleeping, though four, five, and six are often taken care of over night. The cooking stove is in a corner near the door. There is no ventilator except a small hole cut in the roof, as the door is usually closed. I have seen outside of a cabin similar to the one just described, hundreds of empty champagne bottles costing \$20 a pint. The money might have been spent in providing more habitable quarters.

J. C. McCook,

DAWSON CITY, *March 31, 1899.*

Consul.

Under date of April 7, Consul McCook adds:

The outlook of the placer gold fields of the Klondike has not been better since gold was first discovered in the Yukon territory. Already this winter, several new strikes have been made on creeks that were supposed to be barren. Last winter, the only creeks worked were Eldorado, Bonanza, and Hunker, and such a thing as looking for gold on the hillsides or benches was never attempted until last summer, after the snow had left the hillsides and mountain tops. The creek claims being all located, miners began to locate and prospect the hillsides and benches, with phenomenal success, many proving even richer than the creek claims. The most noted of these benches are those of Skookum Hill, adjoining Skookum Gulch; Gold Hill, opposite the mouth of Eldorado Creek; and French Hill, on the left bank of French Gulch; while, judging from the latest developments, the benches on Dominion, Hunker, and Quartz will prove equally as rich. Recently, strikes have been made on the benches of Last Chance, a tributary of Hunker Creek.

The creek claims that have come into prominence this season are those of Sulphur, Dominion, and Gold Run, all tributaries of Indian River. The first-named creek promises to rival Eldorado. The formation of the bed rock is the same as Dominion Creek, but is nearer the surface. The pay streak on Sulphur has been found to be 125 feet in width at different points on the creek. Dominion Creek property is booming, pay having been struck on the benches on both sides. Gold Run Creek is parallel with Dominion and Sulphur, and has a formation similar to the latter. Claims on this creek were sold last summer for 1 and 2 ounces, or \$32, while now they range in value from \$20,000 to \$50,000.

Other developments have occurred in the Stewart River district, the latest being Thistle, Scroggie, Tulare, and Ballarat creeks. A \$90 nugget was taken out of Discovery claim this month.

The principal drawback is the crude way of mining the frozen ground, as it is necessary to build fires to thaw it out and then wait

till summer before it can be sluiced. This requires time. The price of labor in this country is on an average \$1 per hour and the cost of living is exorbitant, every necessity of life costing at least five times as much as in the outside world. In addition to all this is the 10 per cent royalty, which must be paid to the Government on the gross output. A claim in the Klondike must therefore be very rich to yield a profit. However, with proper machinery, this country will probably prove to have the richest placer fields ever known. Nor will the placer mines be the only source of revenue. There are indications of fine leads of quartz, as well as extensive veins of coal, which only need capital to develop.

On the Alaskan coast, between Cape Nome and Golofin Sound, strikes have recently been made which prove that the gold belt is not confined to the Klondike district or to the neighboring section of Alaska. A conservative estimate of the gold output from the Yukon territory this year is \$20,000,000. Next year, I would not be surprised to find the output double that amount.

TRADE OPENINGS IN BRITISH COLUMBIA.

Vancouver is the most important distributing point for merchandise, machinery, and articles in general that are brought to this province for use or consumption. While a very considerable portion of the articles used in British Columbia is imported from the United States, I believe that a much larger part could be secured to the merchants and manufacturers on the southern side of the border if their wares were pushed in this market with more energy than they are at present.

If a number of merchants would combine together, secure a suitable place in this city, exhibit their samples, and take orders, a large increase in the sale of American products would, I believe, result. There should also be connected with the establishment two or three traveling salesmen, to make frequent visits to all important points in the Province, introducing the articles, quoting prices, soliciting orders, and giving information relative to tariff duties, freights, etc.

Such an establishment could be maintained at a cost which would fall very lightly on each contributor if a considerable number of persons or firms united in the enterprise. There is a demand here for—

(1) Food supplies of all kinds, embracing breadstuffs, groceries, fruits, etc.

(2) Household, store, and office furniture, including desks, tables, chairs, parlor and bedroom furniture, carpets, etc.

(3) Hardware, consisting of shelf hardware, builders' hardware, hand tools, nails, bolts, screws, stoves, tinware, and all that goes with such lines.

(4) Machinery for mining and milling purposes, for use in construction of sawmills, canneries, pulp and paper mills, etc.

(5) Glass and glassware, including plate glass, mirrors, table glassware, show cases, lamps, etc.

(6) Electrical apparatus for street cars, motors, lights, etc.

(7) Instruments for use of surgeons, assayers, prospectors, surveyors, etc.

(8) Explosives, for use in mining, etc.

(9) Opticians' wares.

(10) Hydraulic mining machinery.

(11) Ship chandlery.

(12) Bicycles, typewriters, etc.

(13) Stationery.

(14) Paper for printing, newspaper, book, and correspondence.

(15) Printers' supplies.

(16) Tin plate is used in very large quantities for making cans for salmon.

(17) Clothing and boots and shoes.

I have mentioned paper and pulp mill supplies. There are at present no such mills in this province, but material for the use of such mills is abundant. The demand for paper of all kinds is considerable, and there seems to be a good opening for some enterprising "Yankee" to establish these mills.

I have received more than one hundred catalogues from manufacturers in the United States. These catalogues cover a very wide range of production. They are kept on file in this consulate, open to the inspection of all persons interested. Their influence, however, would be much more satisfactory if an energetic salesman could circulate among the business men explaining and quoting prices, etc.

I shall be glad to receive inquiries from interested persons regarding the subject of this article and shall esteem it a privilege, as well as a duty, to aid any who desire to enter upon such an enterprise as I have suggested.

L. EDWIN DUDLEY,

VANCOUVER, *May 16, 1899.*

Consul.

IRRIGATION IN MEXICO.

Public lands, private properties, big haciendas, and large bodies of wild lands held by private individuals or syndicates in Mexico are rapidly changing hands at prices far in advance of those of last year, and certainly 500 per cent above those demanded four years ago. This advance is warranted by the production of the soil in the southern States, where the annual rainfall is sufficient to guarantee two crops of cereals per annum, and where rubber, vanilla, cocoa, coffee, plantains, pineapples, oranges, and other valuable tropical and semi-tropical products are cultivated. But Mexico is not all tropical nor semitropical, and the above remarks are only applicable to those lands in the south, which do not exceed one-fifth of the area of this Republic.

From statistics obtained in the City of Mexico, it appears that nine-tenths of the transfers of lands made during the past year have been for lands situated within 150 miles north and south of the railroad running across the Isthmus of Tehuantepec. As the territory embracing the richest portions of these tropical lands is somewhat limited and is now almost all controlled by investment and improvement companies, it is safe to suppose that investors will pay more attention in the future to the more northern States, which contain many millions of acres of the richest soil and which are situated in a climate more congenial to the American or European settler. Vast areas of land in the States north of the City of Mexico are now lying uncultivated, unimproved, unused, and consequently almost uninhabited. This is caused by the scarcity and uncertainty of the rainfall, and yet it is quite possible by capital and engineering skill to change the greater portion of this desert into a garden.

With but few exceptions, irrigation appears to be practiced today in the most primitive fashion, but the topographical and geological formation of a great portion of the country is especially suitable for the successful operation of modern systems, and by constructing reservoirs to store the rain water, dams, gravitation canals, pumping, sinking artesian wells, etc., enormous areas of magnificent soil are susceptible of development. The value of irrigation in this country has been confirmed by the experience of the Laguna district in the State of Chihuahua, which has the largest area in one State producing cotton; but this example has as yet been followed by but few large landowners.

Several important undertakings, which will undoubtedly be of

great benefit to this country, are now under contemplation. In one place, plans were submitted and estimates completed at considerable cost as far back as 1894. The locality referred to is situated in the north of the State of Tamaulipas, in this consular district, between the city of Camargo and the town of Reymosa.

It is proposed to erect a dam across the San Juan River some 12 miles above Camargo and conserve three-fourths of the water of that river. The canal is designed to embrace about 200,000 acres of the land between the foothills and the banks of the Rio Grande. This land to-day is almost worthless and scarcely suitable for goat pasture. The soil, however, is the finest alluvial and is from 30 to 40 feet in depth. On the banks of the Rio Grande in this vicinity are several small farms, the owners of which are lifting the water from the river and irrigating a few acres. Magnificent results have been obtained in the growth of cane, corn, cotton, and vegetables; and one may conclude that with the realization of this project enough cotton could be grown to supply the amount required by the Mexican cotton mills, which are now importing the raw material from the United States. *

One fact especially noteworthy in the construction of irrigation works in this country is that the expenses are paid in silver, and that building stone, cement, lime, sand, gravel, earthwork, and labor are exceedingly cheap in most of the States. Often, a water supply can be provided at a charge to the landowner not exceeding \$10 Mexican (\$4.72 gold)* per acre for the prime cost of a water right, and an annual rental may be contracted for at \$1 Mexican per acre. At present, foreign investors seem to be interested only in tropical land, which costs from \$6 to \$12 gold per acre and about the same amount to clear before anything can be grown on it; while in the northern States, there is a large quantity of desirable lands that can be bought at from \$2 to \$5 Mexican (94 cents to \$2.36) per acre, and where the cost of irrigation, either by gravitation from the rivers or by pumping, if properly managed, would be comparatively small. The lands, when irrigated, would realize handsomely, returning possibly not less than 20 per cent to the investor if planted in cotton, cane, corn, beans, beets, or other products suited to the climate. Probably, the most important consideration in such an undertaking is the employment of a competent engineer. I have been informed that a great many of the large irrigation works have failed because of lack in this regard.

The arid States of Mexico have many natural resources; no great difficulty would be experienced in bringing them under cultivation.

* The value of the Mexican dollar was estimated by the United States Director of the Mint, April 1, 1899, as 47.2 cents.

The climate is salubrious, the soil fertile, and everything seems to indicate that by the introduction of practical systems of irrigation works and the intelligent application of labor, the most sanguine expectations of the investor could be realized.

P. MERRILL GRIFFITH,

MATAMOROS, *May 12, 1899.*

Consul.

PORT DUES IN MEXICO: EXCESSIVE CHARGES OF STEAMSHIP LINES.

The Department has received from Mr. McCreery, secretary of the embassy in Mexico, under date of May 2, 1899, printed copy and translation of a circular issued to Mexican consuls by the Treasury Department, in regard to the undue charges made by certain steamship lines. The circular reads:

The President of the Republic has been pleased to order that you endeavor by all means in your power to bring to the knowledge of shippers of merchandise to our country the fact that the Government has learned that some navigation companies commit the abuse of charging for lighterage or moorage, dues for loading and unloading, as well as other charges, expenses, and fiscal dues, which are either not collected (but are invented by the navigation companies to the detriment of shippers or receivers) or, even when they are collected, are much less than the amounts charged by the companies.

In consequence, the President has decided that by means of bills to be circulated by the consulate of which you are in charge, to be conspicuously posted in the consular offices, for the benefit of shippers and of companies that are not guilty of the abuse referred to, you give publicity to these facts, so that navigation companies may be required at least to prove the authenticity of the charges they make on account of port dues.

The bills in question should state that the only fiscal port due payable by merchandise upon its importation and which, according to law, the custom-houses should collect from importers and not from the ships, is the due for loading and unloading, which is applicable for the present only in the port of Veracruz, at the rate of \$1 (silver) per ton of 1,000 kilograms of gross weight of merchandise, with the exception of the goods specified in circulars 83 and 85, of July 28 and September 30, 1898, and which only pay 50 cents per ton of their weight.

Those cargoes which are liable to the due mentioned and which are unloaded wholly by means of lighters, or which are transferred from one ship to another, when both vessels are anchored in the port of Veracruz and the transshipped cargoes are destined for other ports, are only subject to one-half of the amounts above mentioned.

All other port dues upon the traffic of the high seas are chargeable on the ships; not upon their cargoes.

It is also to be observed that, according to the laws of the country, no fiscal due is payable in gold, but in silver; and that those charges are also payable in silver which some companies are empowered by the Government to collect in the ports—as, for example, the so-called bar due, collected by the Tampico Harbor Improvement Company, the charges for unloading merchandise on private wharves, such

as those at Progreso, Frontera, and Laguna (Isla del Carmen), as also the expenses of lighterage, carriage, and others, which some companies are in the habit of charging shippers, in addition to the ordinary freight rate.

Finally, with respect to those vessels which carry merchandise, with lighterage paid, to ports, such as Veracruz, where dues for loading and unloading are charged, attention should be drawn to the fact that if the vessel moors alongside a wharf or sea wall, there is nothing to be paid for lighterage and the dues for loading and unloading are collected in their entirety, whereas, if the cargo has to be lightered, the rates are reduced to one-half, as has before been said; but in either case, the due for loading and unloading is a charge on importers, and not on the vessels.

RAILWAY CONSTRUCTION IN MEXICO.

I recently had the following interview relative to railroad construction in northern Mexico with Mr. John P. Ramsey, general manager of the Rio Grande, Sierra Madre, and Pacific Railroad, which runs southwest from Ciudad Juarez for a distance of 150 miles. The questions and answers are given in the order in which they occurred:

What are the first steps necessary to be taken in railway construction in the Republic of Mexico?

To secure a concession (charter).

How are concessions obtained, and from what department of the Mexican Government?

Ordinarily, they are obtained by individuals, with the right reserved to transfer them to such a company or companies as may afterwards be organized. They are secured through the Department of Public Works and Communications (Comunicaciones y Obras Publicas).

How is a company organized to build a railroad in Mexico?

The Federal Government of Mexico maintains a monopoly upon all telegraph, railroad, and postal lines operated within the Republic. The right, however, to operate for a specified time either one or all of these enterprises may be, and often is, conferred upon corporations and individuals. To facilitate the operations and to protect the rights of both the operator and the Government, contracts are entered upon, in the form of a concession, which may or may not provide for governmental assistance in the construction work. Individuals may operate in their own names. Corporations organized in the usual manner under the laws of any country or state may operate; but after organization and incorporation in the original country or state, properly authorized officers must present to the Secretary of Communications and Public Works copies of the organization papers, the articles of incorporation, properly translated and authenticated by the authorities in the place where organization occurred and by the nearest Mexican consul. After the papers have been presented, approved, and filed, the corporation is in a position to proceed with the construction and operation. Where governmental assistance is given in the way of subsidies, the concession is usually granted for a term of ninety-nine years, at the expiration of which time the property reverts to the Government. The Government, in this case, assumes certain obligations set forth in the concession. The Government also maintains representation on the board of directors, and an inspector at all times on the work, not only during construction, but after operations have commenced. The Government may permit a corporation to maintain general offices at

any convenient point; but if the location of those offices is at some place other than the City of Mexico, the corporation is under the necessity of maintaining a representative in that city.

What conditions govern when subsidies are granted?

All plans must be made according to regulations issued by the Department of Communications and Public Works and under the supervision of the Government inspector, who approves and forwards the plans to the department. The plans must be made in triplicate. After approval, one copy is placed on file in the department, one is sent to the inspector, and one is returned to the company, with the authority to proceed with the work. Subsidies vary according to the character of the country through which the proposed line is to be built, and for other reasons. Subsidies range from \$7,000 to \$25,000 (Mexican currency) per kilometer (0.621376 mile), or even higher. The difficulties to be encountered in construction have a great deal to do with the amount of subsidy. Subsidies may be paid in Government bonds, in lands, or in both land and bonds.

What is the cost of construction per mile in open countries and in mountains?

The cost of construction of a standard-gauge road will vary from \$10,000 in gold per mile where the work is light and few difficulties are to be encountered to \$50,000 in gold per mile, or even more, in the mountain districts.

What system is followed in building across a barren, desert land (first 50 miles of your road, for instance)?

The work is performed most economically with teams and scrapers. The men live in camps conveniently located. Food and water are hauled in wagons from the nearest source of supply. Where sand is encountered, the transportation of supplies becomes a most serious item of expense. To illustrate: During the construction of the Rio Grande, Sierra Madre, and Pacific road, one contractor used 50 per cent of his teams to haul supplies. Water costs 50 cents in gold per barrel in camp. After the track was laid, trains were immediately put to work covering the sand with clay and with a heavy material in the form of disintegrated lime, called "calichi," which is to be found in large quantities along the line of road.

What kind of labor is employed in construction? What wages are paid? Is work done by contract, at so much per mile for grading, etc.?

The work of construction is almost invariably done by contract. The contractor is paid on the basis of the cubic meter (35.316 cubic feet). The labor employed is largely of the native, so-called "peon," class, although there is always to be found a large number of white and black Americans along the line of a new road. The lowest price paid for labor is \$1 per day, Mexican money, in the State of Chihuahua.

What duties are paid on material for construction, and where is it procured?

There are no duties on rails, ties, fastening, bridge timbers, etc. The rails and fastening for our road were furnished from Pittsburg, and the ties and timbers came from eastern Texas.

How many men are necessary to keep a track in good condition after the road has commenced operations?

One man for every 2 miles will maintain the track in good condition for light traffic and two trains per day.

How many miles of road can be constructed per month in northern Mexico?

The Rio Grande, Sierra Madre, and Pacific began grading August 15, 1896, and 156 miles of track were completed June 15, 1897, ten months later, making an average of 15.6 miles per month. On several occasions, $3\frac{1}{4}$ miles of track were put down in one day, the necessary material having been transported 100 miles from the base of supplies to the front.

What kind of fuel is used to run the engines, where obtained, and at what cost?

Bituminous coal and cord wood. Coal costs from \$4.25 to \$6 per ton, and wood

is as low as \$2.75 per cord. Coal is shipped here from a distance of 500 or 1,000 miles, and wood is obtained in the vicinity of the line. The wood is principally "grease-wood" roots, dug from the sand hills by the Mexicans and transported to market on the backs of burros.

What amount of rolling stock is necessary to equip a new road in Mexico?

The equipment depends entirely upon the character and amount of business. My road, running one passenger train each way per day, has a passenger equipment of 8 cars, providing first, second, and third class coaches in accordance with Government regulations; a freight equipment of 150 box cars, 50 coal and flat cars, and 16 water, boarding, and miscellaneous cars, and a motive power of 6 locomotives.

How are rights of way secured?

By purchase, gift, and condemnation.

Are freight and passenger rates subject to Government control and jurisdiction?

Yes. No rates may be changed without authority and publication for fifteen days if in the nature of a decrease and thirty days if in the nature of an increase.

How long does a concession last?

Concessions are for various periods, but when providing for Government assistance in the way of subsidies, the term is ordinarily fixed at ninety-nine years. At the expiration of that time the Government assumes control, the title to all the property, with the exception of the rolling stock, passing into the hands of the Government.

CHARLES W. KINDRICK,

CIUDAD JUAREZ, *May 17, 1899.*

Consul.

RAILWAY CONTRACT IN VENEZUELA.

Consul Plumacher transmits from Maracaibo, under date of April 29, 1899, translation of a recent concession for the construction of a railroad between Puerto Cabello and Yaritagua, as follows:

The Minister of Public Works of the United States of Venezuela, authorized by the President of the Republic as the party of the first part, and Luis Muñoz Febar, civil engineer, with previous approval of the cabinet as the party of the second part, have agreed upon the following contract:

ARTICLE 1. The Government of Venezuela grants to Luis Muñoz Febar, his associates and successors, the right to construct a railroad from Puerto Cabello to the city of Yaritagua, in the State of Lara, to be divided into two sections, the first from Puerto Cabello to San Felipe and the second from San Felipe to Yaritagua.

ART. 2. The duration of this contract shall be ninety-nine years, counting from the day that the work is concluded, and the Government of Venezuela binds itself not to grant a similar contract to any other person or company within forty years to build a railroad between the above-mentioned places. At the end of the ninety-nine years, the railroad, with all its appurtenances, warehouses, stores, and offices, shall be turned over to the National Government in good order and become national property.

ART. 3. Luis Muñoz Febar, his associates or successors, bind themselves to organize a limited joint-stock company for the construction of the railroad, and are hereby authorized to transfer this contract, if convenient to their interest, subject to previous approval of the National Government.

ART. 4. The term of ten months is fixed for the beginning of the work of construction, counting from the date on which Congress approves this contract, and two years from date of commencement of works to conclude the first section from Puerto Cabello to San Felipe and deliver same for public service. Two years are also granted to complete the second section after the first one is finished.

ART. 5. In case of delay due to force majeure, an additional period equal to that lost shall be granted.

ART. 6. The first section can be started from El Palito, by previous arrangement with the company of the Puerto Cabello and Valencia Railroad for services between El Palito and Puerto Cabello, until said road is constructed by the company as per this contract.

ART. 7. The railway shall be of one track with a width of 1.7 meters (3.51 feet) between rails, and its declivity shall not exceed $2\frac{1}{4}$ per cent; the minimum radius of its curves shall be 65 meters (213 feet), and the work shall be all done in accordance with scientific principles, and only good materials shall be used.

ART. 8. The Government shall allow the introduction free of import duties of all the materials, machinery, tools, and other articles described in the inclosed list, necessary for the construction, preservation, and management of the railroad, all subject to the laws and decrees issued by the Government, with the exception of articles produced in the country. The enterprise shall not be subject to national taxes during the period of this concession, excepting the stamp fee, and is free from the public-register tax.

ART. 9. The company is authorized to open to public use parts of the road completely constructed, and may charge a rate in proportion to the distance traversed. As long as the National Government does not reduce the tariff as per article 9 of the law of May 31, 1897, on construction of railroads, the company may charge for freight and fares as follows:

For a first-class passage of one person with 25 kilograms (55 pounds) of baggage, 25 centimes of a bolivar (4.8 cents) per kilometer (0.62137 mile); for a second-class passage of one person with 25 kilograms of baggage, 15 centimes of a bolivar (2.8 cents) per kilometer.

Freights.—For every 1,000 kilograms (2,204.6 pounds) of merchandise, effects, or produce, 50 centimes of a bolivar (9.6 cents) per kilometer; less weight shall be taxed in proportion, but small parcels not exceeding 20 kilograms (44 pounds) in weight sent in charge of the company shall pay double freight.

The company shall have the right to charge for freight per weight or measure, taking 1 cubic meter (35.316 cubic feet) as the equivalent of 1,000 kilograms. Sugar, spirits, woods, bananas, empty bags, salt, cocoa, coals, vegetables, corn, starch, cement, and onions shall pay one-half of the regular rate established. Bags and returned boxes shall be carried gratis.

ART. 10. If the second section shall not be constructed in the stipulated time, the grant to said section shall be annulled; but all other rights and privileges granted to the first section, if this is well constructed, shall remain in force.

ART. 11. The Government shall allow the contractor, his associates or successors, to cut from the national forests the timbers necessary for the construction and preservation of the road, without charge.

ART. 12. Private lands which may be necessary for the construction of warehouses and offices of the road from Puerto Cabello to Yaritagua shall be taken by the Government for public use, in accordance with the law, and the contractors, their associates or successors, shall pay their value.

ART. 13. The Government grants to the Puerto Cabello and Yaritagua Railroad Company the right of property in the public lands required for the width of the line, with a strip of land of 15 meters (49.21 feet) at each side of the road, and for

its stations, offices, and stores. It further grants areas of 25 square kilometers (9.65 square miles) in the public lands of the districts through which the railroad passes, request for the same to be made to the Department of Agriculture, Industry, and Commerce, with a map of the land needed; but further areas shall not be granted until it is proved that the first have been distributed among colonists to be used for agricultural, breeding, or other industries, according to the law on colonization, and with previous consent of the Government.

ART. 14. The contractor or the person representing him is bound to deposit at the bank the sum of 50,000 bolivars (\$9,650) in gold or its equivalent in public-debt bonds of Venezuela within six months after the approval of this contract by the National Congress and in conformity with article 6 of the law in force on railroad construction, and shall also in due time deposit the amount to the credit of public instruction, as prescribed in the above-mentioned article, as a guaranty that the work of construction shall be performed.

ART. 15. The contractor, his associates or successors, bind themselves to convey all mails sent from the national post-offices gratis; and troops, public employees on commission, and mechanics of the Government for one-half the regular fare.

ART. 16. The company shall have the right to construct branches at either sides of the main line, for connecting other towns or places, if the branches are not longer than 25 kilometers (15.55 miles), after notification to the Department of Public Works and with the permission of the Government, subject to the approval of Congress.

ART. 17. The contractor, his associates or successors, renounce the subsidy per kilometer by which the Government of the Republic may favor the construction of railroads, in conformity with article 5 of the law; but it will have the benefit of all the other privileges and rights granted by said law for the period of this concession.

ART. 18. All doubts and controversies which may arise between the contracting parties, their heirs or assignees, in the interpretation of this contract, shall be decided by the courts of the Republic according to law, and in no case must they be made a pretext for international claims.

Made two of one sole tenor and effect in Caracas on the 12th day of April, 1899.

A. SMITH.

LUIS MUÑOZ FEBAR.

LIST OF ARTICLES ADMITTED FREE OF DUTY FOR THE RAILROAD FROM PUERTO
CABELLO TO YARITAGUA.

Portable gauges, trolley and hand cars, hatchets, knives, picks, crowbars, spades and "chompas;" rails, with their corresponding bolts and plates; galvanized zinc or grooved iron, bolts and nails; Portland cement, dynamite, powder, caps, bits for boring, engineering instruments and articles for office and drawing purposes, safes, tar and paints, ropes, iron and wooden pulleys, iron hammers, saws, pumps, locomotives, cars and wagons, blacksmith tools, coals, and engine grease.

THE RAILWAYS OF URUGUAY.

The railway system of Uruguay is well planned for the service of the State, and as the State has been and is yet the guarantor of interest—at one time at the rate of 5 per cent, but now $3\frac{1}{2}$ per cent—on a value of £5,000 (\$24,432) per kilometer (0.621376 mile) on the bonds outstanding, there is no reason why the public convenience should not be considered in every way.

MILEAGE AND CAPITAL.

Herewith is given an official statement as to the length of the several lines and the amount of capital invested in securities issued:

Name of line.	Length.		Capital.	
	<i>Kilometers.</i>	<i>Miles.</i>		
Central Uruguay Railway Company, Limited.....	321.7	199	£2,790,210	\$13,760,421
Central Northern Extension.....	293.3	182	1,637,961	7,960,490
Central Northeastern Company.....	124.3	77	800,000	3,888,000
Central Eastern Extension.....	581.2	360	3,041,435	14,780,374
Great Eastern of Uruguay Company, Limited.....	419.5	260	2,097,315	10,192,951
Midland of Uruguay Company, Limited.....	317	196	1,585,180	7,703,989
Northwestern of Uruguay Company, Limited.....	178.8	110	1,015,535	4,935,500
Northern of Uruguay Company, Limited.....	114.2	70	570,775	2,774,967
Branch to San Eugenio.....	3	1.8	15,000	72,900
Western Railway Company.....	520.1	323	2,500,000	12,150,000
Northern Railway.....	23	14	138,000	740,440
Interior (not yet built).....	617.7	385	3,088,310	15,011,187
Total.....	3,513.8	2,177.8	19,279,721	93,971,179

The amount paid in 1897 by the Government of Uruguay, on its guaranty of interest on bonds, was over \$1,000,000 (Uruguay standard being \$1.0352 United States) and a regular percentage of all custom-house receipts is set aside for the fund thus used. The official returns do not show that a single line has yet proven self-supporting above the guaranty of interest by the Government, nor is the outlook very promising.

FUEL, EARNINGS, OUTLOOK, ETC.

All the fuel for the motive power is imported from Wales, and the machinery of all kinds, rails, chairs, and general outfittings come from England. A good percentage of capital will never go back to England, for the simple reason that the earning capacity of most of the lines can, under no present conceivable circumstances, be brought to the point desirable for all such enterprises. The interior of the country is largely devoted to cattle and sheep farming, and the season for handling these is not continuous. The cultivation of grain, while

it is showing a slow increase and has added a considerable item to the receipts for freight, is not of such promise as to give the management much encouragement.

CONSTRUCTION AND MANAGEMENT OF ROADS.

The construction of the lines can be classed from excellent to first class, and the best of English methods—somewhat conservative, yet safe—have been employed. The bridges and culverts can hardly be improved upon for lines with such traffic. The grades are generally easy and, with but few exceptions, are kept to a legitimate normal. The rolling stock is good, but it does not compare in any way with the equipment on similar lines in the United States. On none of the lines at present is a through passenger train operated; the trains are all mixed—that is to say, freight and passenger in the same train—the old accommodation train of the Western roads.

The management is to be commended for the practical results obtained. The rates maintained would be deemed very high in comparison with the American standard, but they are not more so than is required by the investment and by public convenience.

It should be stated that some of the passenger equipment is of American manufacture (Hollingworth), and it gives the best of service and satisfaction. One can not well fail to appreciate the scrupulous cleanliness that marks the care of the passenger equipment at all times.

THE STATION AT MONTEVIDEO.

The general station at Montevideo is the most modern and complete in South America. Its construction is very substantial and its style of architecture at once elegant and dignified. The offices are roomy, and the central management of all departments are found in the spacious building. In its general arrangements it deserves to rank with first-class stations in our larger cities, and would be deemed a great credit to any railway company in the United States.

The width of the station is 86 meters (282.15 feet) and it has two stories of 10 meters (32.8 feet) each, the first leading out to a handsome terrace over the principal entrance, resting on groups of pillars forming three arches. These arches run all along the base, over the several entrances to the station, and are each 7 meters (22.8 feet) wide by 9 meters (28 feet) in height. The lower interior contains ample waiting rooms for passengers of all classes, including the usual accommodations of restaurant and toilet rooms for both sexes. The depth of the station is 225 meters (738.2 feet), and it is handsomely spanned by an iron roof with glass. The cost of the total improvement, including sheds, lands, etc., all included in the station grounds, was £2,000,000 (\$9,733,000), the station proper cost:

ing \$600,000 in Uruguayan coin. One of the imposing sights, not only of the station but of the city, is the stairway of Italian marble leading to the second floor. It is lighted by electricity, with 750 incandescent 16-candlepower lamps and 12 2,000-candlepower arc lamps, fed from an independent station. The offices are also heated by electric appliances.

The side wings of the building are 120 meters (394 feet) in length and 10 meters (32.8 feet) high. The glass roof, covering four platforms and seven lines of rails, is 120 meters (394 feet) long by 48 meters (157½ feet) wide. Two of the platforms are extended 100 meters (328 feet) outside the body of the station, to meet the requirements of very long trains. The arrival lines are provided with hydraulic buffer stops, supplied by a London firm.

The offices of the local committee, administration, etc., are on the first story, and are the best and most comfortable in the Republic.

The clocks are electrical, being worked by a regulation clock, which makes a contact every half minute, moving all the others simultaneously.

The station has a complete telephone installation, with exchange board, enabling any two offices to communicate and also permitting connection with the subscribers of the city lines.

The foundation stone was laid August, 1893, and the station was opened to the public service July 15, 1897.

PASSENGER TARIFFS.

The railways are permitted to make their own tariffs. The Government recognizes the right of the capital employed to earn a protective interest; if it fails in this, the Government must make up the difference. This has amounted to an average of \$1,000,000 a year for several years, and is a burden that bears heavily on a treasury overdrawn by other needs. As a sample of passenger charges, I give the following illustration:

For the Central Uruguay line, from Montevideo, first class, to—

Bella Vista, 3 kilometers (1.863 miles).....	\$0. 20
Florida, 108 kilometers (67.068 miles).....	3. 50
Piedra Sola, 385 kilometers (239.85 miles).....	12. 40
Rivera, 567 kilometers (352.1 miles).....	18. 40

The foregoing averages about 5¼ cents per mile. The second class pays, respectively, 10 cents, \$2.70, \$9.60, and \$14.20 for the same distances.

Monthly tickets are sold for stations which permit the owner of the ticket to travel as much as he pleases. Return-trip tickets are also sold to near-by stations, as far as Santa Lucia, 59 kilometers

(36.7 miles), with a reduction of about one-third. Thus, regular fare to Santa Lucia, \$1.90 first class; round trip, \$3—or a difference of 80 cents.

FREIGHT TARIFFS.

The freight tariffs would delight any American railway management from the rates permitted. The schedules now in force give the following:

Articles.	Distance in miles.			
	1.86.	67.68.	239.8.	352.
First-class goods.....per 220 pounds...	\$0.10	\$0.58	\$1.31	\$1.85
Second-class goods.....per 2,204 pounds...	1.00	4.20	10.60	15.20
Wool and sheepskins:				
In bundles.....per 220 pounds...	.14	.55	1.09	1.55
In bales.....do.....	.11	.44	.96	1.42
Cereals, potatoes, pumpkins, etc., with a minimum of 2,204 pounds, per 220 pounds.....	.08	.20	.33	.46
Hay, alfalfa, and straw.....per carload *...	5.00	16.00	34.00	46.00
Brick.....per 1,000...	2.00	4.60	8.70	11.50
Coal and coke (minimum, 10,853 pounds).....per 2,176 pounds...	.90	2.45	6.55	9.10

* These hay cars are open flats and are allowed to put on a cargo 2.3 meters (7.55 feet) high and 2.5 meters (8.2 feet) wide, and in tonnage will amount to the average of the same American vehicle. The cargoes are well covered by waterproof and fireproof tarpaulins.

Coal and coke, per ton of 2,176 pounds, costs 90 cents, \$2.45, \$6.55, and \$9.10, with a minimum of 5,000 kilograms (10,883 pounds). The coal and coke all comes from English sources (coke being made here by the Gas Company, Limited), at from \$8 to \$14 per ton, and the cost to the consumer, say at Rivera, is above 1 cent per pound. It may be noted here that this great cost of fuel makes any great development of manufacturing power, where steam is used, impossible.

The special tariff on animals, from 1 up to 10, and by the carload, show these figures:

Distance.	One animal.	Each additional animal, up to 10.	Per carload.
3 miles.....	\$2.00	\$1.00	\$12.00
67.68 miles.....	4.00	2.25	20.00
240 miles.....	9.50	4.75	46.00
352 miles.....	13.00	6.50	64.00

NATIONALITY OF STAFF.

The mechanical staff, heads of departments, engine men, and machine-shop chiefs are almost exclusively European (English and Scotch predominating); but many young men, native to the country, are working into positions of responsibility. Station masters, as a rule, are natives; but in all larger stations, Englishmen and native assistants are found. A very thorough and constant inspection

is kept up, and great care is shown in the operating department, an accident or derailment being rare.

LABOR AND WAGES.

I addressed a note to the manager of the railway, Mr. Frank Henderson, asking some facts as to the employment of labor on the lines of the Republic. His answer is herewith given; it is a clear statement:

The opportunities for North Americans obtaining employment on lines in Uruguay are few and not at all certain.

The wages generally paid do not compare favorably with those in the United States, and the standard of living is also low, the labor market being for the most part supplied by Italians, who are satisfied to live under conditions which Americans would not accept.

Taking artificers, such as masons, bricklayers, carpenters, whose wages range from \$1.50 to \$2 per day of ten hours, these men with steady work assured can save from \$15 to \$16 per month.

Ordinary laborers' wages can be calculated at 10 cents per hour of work, or say \$24 per month; their keep, say, 40 cents per day, equal to \$12 per month—leaving \$12 for wine, clothes, and other expenses, so that there is not much margin left for the ordinary laborer.

Locomotive drivers are prosperous, and if they secure a position can keep it as long as they like; but all the railways in the country are undulating, and no man can expect to step on a driver's post without first being a fireman, or, at any rate, till he learns the roads.

Clothing is expensive, but the bare necessities of life are cheap, and an artisan who manages to secure constant employment at the top rate of wages can save money.

A note of the rate of wages and cost of some of the necessities is herewith given.

Current rate of wages.

Description.	Wages.	Description.	Wages.
Engine drivers:*		Sawyers and other machinists,	
First class.....per month...	\$80.00	per day.....	\$1.40 to \$2.00
Second class.....do.....	70.00	Painters.....per day...	1.50 to 2.50
Third class.....do.....	60.00	Coach trimmers.....do.....	2.50
Firemen:*		Tarpaulin makers.....do.....	1.20 to 1.80
First class.....do.....	50.00	Laborers (peons).....do.....	1.00
Second class.....do.....	45.00	Permanent way department:	
Third class.....do.....	40.00	Laborers (peons).....per day...	.80 to 1.00
Cleaners:		Carpenters.....do.....	1.50 to 2.00
First class.....do.....	40.00	Masons.....do.....	1.50 to 1.80
Second class.....do.....	37.00	Bricklayers.....do.....	1.50 to 1.80
First class.....per day...	1.20	Foremen.....per month...	30.00 to 40.00
Second class.....do.....	1.00	Traffic department:	
Fitters and improvers.....do.....	\$1.50 to 3.00	Station masters.....do.....	30.00 to 120.00
Turners.....do.....	1.20 to 2.20	Telegraphic clerks.....do.....	15.00 to 35.00
Machinists.....do.....	1.20 to 1.50	Porters, pointsmen, etc.,	
Boiler makers.....do.....	1.80 to 3.00	per day.....	1.00
Blacksmiths.....do.....	1.50 to 3.00	Guards.....per month...	45.00 to 60.00
Coppersmiths.....do.....	2.00 to 2.50	Brakemen.....do.....	30.00 to 45.00
Carpenters and coach builders,		Foremen.....do.....	35.00 to 100.00
per day.....	1.50 to 2.00		

* Drivers and firemen get extra time allowances and night expenses.

Cost of provisions per kilogram (2.2046 pounds).

Articles.	Price.	Articles.	Price.
Bread	\$0.06	Butter	\$0.50
Meat	.10	Bacon	.30
Rice	.07	Tea	2.00
Cheese:		Coffee	.80
Native	.28	Sugar	.16
Dutch	.35	Flour	.05

GOVERNMENT GUARANTIES.

It may be of interest to know just what the governmental guaranty on the railway indebtedness amounts to. From the proper department I have been furnished the following, dating from the year 1892:

1892	\$887,811. 20
1893	820,013. 70
1894	781,257. 50
1895	775,286. 15
1896	870,310. 75
1897	894,602. 70
1898	845,746. 20
Total	5,875,628. 20

All guaranties now due have been paid.

ALBERT W. SWALM,
Consul.

MONTEVIDEO, April 2, 1899.

LIGHT RAILWAYS IN ARGENTINA.

In order to answer some fifty letters of inquiry from the United States about light railways here, I have concluded to send to the Department a general report for the benefit of all interested.

On December 31, 1897, the legislature of the Province of Buenos Ayres passed a law authorizing the construction of light railways of 1-meter (3.28 feet) gauge throughout the Province. The Government was to fix the tariffs, regulate the construction and working of the lines, and the right to expropriate any railway so constructed at cost price was retained; so that it was difficult to determine what benefit there could be for the concessionnaires.

Moreover, there were two articles in this law capable of any interpretation that the authorities might like to give them, when the railways were once built; for instance, paragraph 3 of article 5 says:

The lines may be laid upon the public roads, or on one side of same, so long as they are constructed under the required conditions, and the company is bound to keep them in order.

This might easily be construed to refer to the whole road; nor do I see in the law any article giving the right to expropriation of land, so that the company would be bound to use the roads or be at the mercy of the landowner, equally disastrous alternatives.

Article 6 says:

Every company shall be bound to construct the works necessary to guarantee the efficient working and security of the railway.

As article 5 gives the Government the right "to regulate the construction and working of the lines," it is at least presumable that it will dictate to the company any works that it may consider necessary for "efficient working and security."

It will not surprise railway men at least to learn that concessionnaires have made little effort to obtain permission to construct light railways under the above law. Six months later (July, 1898), the supplementary regulations appeared; these apply chiefly to the form in which the petitions for concessions shall be made, the periods allowed for presentation of plans, execution of works, etc., and, in agreement with the law itself, left all powers in the hands of the Government, to whom the companies would be bound hand and foot.

For instance, articles 25 to 29 prescribe that fences, barriers, signals, and continuous brakes shall not be exacted except when the Government shall think fit, and a company would hardly be willing to accept such indefinite conditions. The regulations for working are as numerous and as vague as those for construction, and I frankly can not see what profit a railway company can gain by the time it complies with all the conditions expressed and implied in this law.

But, apart from these considerations, the question presents itself, With what capital are these light railways in the Province of Buenos Ayres to be built? And, secondly, Are they to be constructed with a view to competing with existing broad-gauge lines, or as feeders to them?

To the first question, I answer without hesitation, With foreign capital; and for railway purposes it is hardly likely to be other than British capital. If this be admitted as correct, it disposes at once of the second question; for it is improbable such capital would be forthcoming for the purpose of competing with the Great Southern, Central Argentine, Buenos Ayres and Rosario, Western, and Pacific railways.

Another difficulty lies in the condition (article 5, paragraph 1) that the roads shall be meter gauge, as this would involve transshipment of produce; further, each light-railway branch would need repairing shops, running sheds, etc., for the same reason that the

difference in gauge would not allow the light-railway engines or wagons to run into the broad-gauge-railway shops for repairs. As feeders, therefore, it would appear that the light railways can hardly be a success, unless the law be modified and equal gauge allowed.

D. MAYER,

BUENOS AYRES, *April 20, 1899.*

Consul.

PROPOSED RAILWAY IN PERU.

Minister Dudley sends from Lima, under date of May 11, 1899, copy and translation of a Government decree under which bids are invited for the construction of a line of railroad from Oroya, the present terminus of the Central Railroad of Peru (the trans-Andean line) to Cerro de Pasco, about 60 miles to the north. Cerro de Pasco, adds Mr. Dudley, has owed its existence to the silver mines of the vicinity, long the most productive in the world and still very rich. Recent important discoveries of copper deposits in that region, coincident with the notable rise in the price of copper, have undoubtedly stimulated the project, by no means new, of securing cheaper and better transportation by means of an all-rail communication from Cerro de Pasco to the port of Callao.

The translation of the decree reads:

Whereas the two proposals sent in for the building of a railroad to connect Oroya and Cerro de Pasco have been read, and considering the importance of the work proposed and that the concession should be made to the person or company offering the best guaranties and accepting the conditions fixed by the Government within the limits according to the law of November 9, 1893, it is resolved:

That sealed proposals for the building and working of the said railroad be solicited by the Director of Public Works, the contract to be subject to the stipulations contained in the following clauses:

(1) The grantee's obligations are the following:

(a) To construct a railroad of 1 meter and 4 centimeters (3.41 feet) wide, similar to the Central, which, starting from the terminus of the latter at Oroya, shall end at Cerro de Pasco.

(b) The grade to be limited to a maximum of 3 per cent.

(c) The railroad to be furnished with the necessary number of locomotives, passenger cars, freight cars, etc. These, as well as the materials to be used in construction of the line, to be of the very best quality known.

(d) Main stations to be established at the termini and roadside, at the inhabited parts of the tract.

(e) A complete and definite study of the work to be made in accordance with the prescriptions of the public-works regulations, to be presented for examination and approval to the Government at latest within twelve months from the date of signing the contract, it being understood that within sixty days from the said date proofs must be forthcoming of the said surveys having been begun.

(f) The works of construction (road building) shall be commenced within a term not exceeding six months from the date on which the Government approves the

surveys, it being understood that the amount of work to be executed shall not be less than one-third of the whole for each year, so that the railroad shall be definitely finished in three years from the commencement of the work.

(g) For each month's delay in the sending in of the surveys, the beginning of the work, and the definite finishing of the same, a fine of £100 (\$486.65) will be the contractor's liability. If, after the imposing of three of the said fines, the surveys (estimates) of the work be not forthcoming, or the latter be not formally begun, the Government will be entitled to declare the forfeiture of the contract, with the loss to the contractor, and in favor of the national treasury.

(h) Each estimate to be accompanied with a certificate of having deposited at the national treasury the sum of 300,000 soles in the internal-debt bonds, which deposit will be returned to those whose estimates are not accepted, only the favored contractor's deposit being retained as a guaranty for the fulfillment of his engagement, this to be returned to him as soon as he has completed 20 kilometers (12.43 miles) of the road.

(i) If the grantee fail to sign the corresponding contract within ten days from the date of its approval, the same will be null and void, and the deposit spoken of in the preceding article will be lost to him in favor of the treasury.

(j) The working of the railroad will be subject to the general regulations already established.

(k) In fortuitous cases which, in the judgment of the Government, are clearly proved, the term limits spoken of in the foregoing articles will not apply.

(2) The grantee will enjoy the following rights:

(a) The property ad perpetuum of the railroad, its material, stations, and dependencies.

(b) The privilege of working the same during a term to be fixed, which in no case shall exceed twenty-five years.

(c) The gratuitous use of such lands as are required for the establishment of the line, its factories, stations, and other dependencies, whenever the said lands can be freely disposed of by the Government and do not constitute public roads.

(d) Government aid in the expropriation of such private property as may be required for the use of the line, the expropriation to be effected for the account of the grantee.

(e) The exoneration from import duties of road materials and rolling stock during the term granted for the completion of the works.

(f) The preference in the extension of the line and the building of branches. This right to be exercised within four months from the notification by the State of its desire to build.

(g) With the authorization of the Government, the different sections of this railroad may be opened to public traffic as each is successively finished.

(h) Fares and freights to be charged in national metallic coin and subject to the maximum of the following tariff:

Freights.—For every 1,000 kilograms (2,204.6 pounds) per kilometer (0.62137 mile): First class, 20 cents (8.6 cents gold);* second class, 18 cents (7.7 cents); third class, 15 cents (6.4 cents).

Fares.—Per kilometer: First class, 5 cents (2.17 cents); second class, 4 cents (1.7 cents).

The classification of the various classes of merchandise will be fixed by agreement between the Government and the grantee; however, with the proviso that all ores not reduced to metal shall, in so far as the freight is concerned, be considered as belonging to the third class, irrespective of their grade.

* Taking the valuation of the Peruvian sol, April 1, 1899, by the Director of the Mint, as 43.4 cents.

Only one-half of the tariff prices shall be charged for passengers and freight for Government account; political authorities, police agents in uniform and in commission, mail bags and their conductors shall travel free.

(i) The grantee may consult the surveys that the engineer Rey y Basadre has made regarding this line, free from all obligation as regards the adoption of the same.

(j) The grantee may also transfer the contract with the previous approval of the Government.

(3) The questions respecting the contract that may arise and are not of an administrative character shall be decided by the tribunals of justice.

(4) All offers (bids) to be subject to all the stipulations contained in this resolution without the right to propose alterations or changes. The only point open to discussion will be the term over which the working privilege shall extend.

(5) The offers (bids) received within the stipulated time shall be placed before the Government by the Director of Public Works in the identical form in which received.

The Government is free from the obligation to accept any one of the offers, or even to consider as the best the one that proposes the shortest privileged working term.

PERUVIAN TRADE AND THE UNITED STATES TARIFF.

Minister Dudley sends from Lima, May 4, 1899, translation of a recent editorial from *El Comercio*, as follows:

According to latest telegrams, copper is quoted in London at £77 (\$374.72) per ton; silver, at 28½d. (57.78 cents) per troy ounce; and granulated Peruvian sugar at 13s. (\$3.406) per cwt. These quotations relating to three principal export products of Peru are very flattering and significant, since the rise which all have experienced indicates greater gain and benefit for the commerce and industry of the nation.

The upward movement in the price of copper, which began several months ago, is attributed principally to the great consumption occasioned by the more general employment of electricity and the new discoveries in that branch; also to the fact that it has been demonstrated to be indispensable to cover the keels of men-of-war with a shield of copper, in order to avoid loss of speed in consequence of the great quantity of mollusks which attach themselves in a few weeks to iron bottoms. This precaution, as is easily understood, necessitates the use of immense quantities of copper.

It being possible, according to the interesting report concerning Cerro de Pasco, recently published by the National Society of Mines, to estimate the exportation of minerals, etc., connected with our new copper industry at about 1,000 tons per month, the increase in price represents at least a couple of million soles more annually in the total value of those exportations.

The increase in the price of silver is a subject still more interesting to the country. To judge by notices which appear in certain European periodicals, it appears that the great producers of silver in the western part of the United States, in agreement with the owners of the principal smelting establishments, have formed a league for the purpose of exercising a certain control over the price of silver and of making New York the principal market for the purchase and sale of that metal.

a prerogative which thus far, and for more than a century past, has been quietly enjoyed by London. To this league is attributed the intention of raising the price of silver about 15 per cent—that is, to advance it from 27½d. to 32d. (55.75 to 64.84 cents). At this price, the intrinsic value in gold of our silver sol would be 24d. (48.66 cents), which would fortify in a most satisfactory manner our present monetary standard, at the same time causing the injury to disappear which is now suffered in effecting sales of silver bullion, in consequence of the difference between its metallic and its monetary value.

But, undoubtedly, that which is the most worthy of study is the new destination given during recent months to the shipment of sugar. There has been put into effect in the United States the tariff which establishes an additional duty exclusively on sugars from those countries which give a bounty (*prima*) upon exportation; a duty which, in consequence of being always equal in amount to the bounty paid, the English call countervailing (compensating) and might be called “*para-primas*,” since, in the same manner that the “*para-rayos*” (lightning rods) protect us against lightning, those duties protect us against the bounties. The proceeding mentioned has produced the result which was to have been expected, and, in fact, has closed the doors to the importation of beet sugar into the United States,* because the importers of sugar from Germany, France, and Austria, being obliged to return the bounty which they had received in the form of an additional duty, have ceased to ship to the American market, and it has fallen to cane sugar, on which there is no additional duty, to supply the demand.

This in itself satisfactorily explains the change in the direction of our exportations; but there is something more. The reduced shipments made during the last year to the United States have permitted the refiners of that country to appreciate the quality of our sugar; and, convinced in a practical way of its superiority, they pay higher prices for the Peruvian product than for that of any other origin. In view of the fact that our sugar brings 1s. (24 cents) more in New York than in Liverpool, it can not surprise us that almost all produced within the last few months has been consigned to the first of those ports, nor that the greater part of that which will be produced up to next June has been purchased for shipment to the same place.

We thus see that by reason of the causes indicated, there has been opened for our sugars the principal market of the world, which for itself alone consumes the fabulous quantity of 2,200,000 tons per year; and that the New York market has been substituted for the old one of Liverpool.

The influence which this change must exercise in our foreign commerce must be great, and will certainly facilitate the exchange of some of our other products for the manufactures of the United States.

This is a natural evolution, the proper result of the geographical situation of both countries and the general development of the commercial and political interests of the American republics; and the complete realization of this idea will be promoted by the efforts of the statesmen, the wealth of the capitalists, and the energy of the promoters of the great Republic of the North.

The construction of the canal to unite the Atlantic and the Pacific, a work which it is no longer possible to consider doubtful; the establishment of a great international bank with branches in all the capitals of the American republics, a project which has received the approval of one branch of the United States Congress†—will give a great impulse to commercial traffic among all the nations of this hemisphere.

* NOTE BY BUREAU OF FOREIGN COMMERCE.—The imports of beet sugar into the United States, according to Treasury returns, have been: In 1896 (calendar year), 1,062,389,004 pounds; in 1897, 1,373,230,362 pounds; in 1898, 418,981,330 pounds.

† NOTE BY BUREAU OF FOREIGN COMMERCE.—The bill was discussed, but did not pass either House of Congress.

But that which will undoubtedly be conducive to the greatest development of pan-American commerce will be the construction of the central railroad which, traversing the three Americas from north to south, will, in the end, unite New York and Buenos Ayres.

The greatness of this work predisposes one to consider it Utopian; but when one considers that of the 10,228 miles which separate the northern from the southern metropolis, 4,762 are constructed and the execution of the remaining 5,456 only requires the expenditure of \$174,000,000, of which more than \$100,000,000 would be spent within the United States itself in the purchase of rails, rolling material, bridges, etc., it ceases to appear so difficult to realize a work which already has its principal branches, as would be the lines from Oroya to Callao, from Puno to Mollendo, from Oruro to Antofagasta, and from Rosario to Mendoza, and also from Santiago to Valparaiso, not to mention the Mexican railroad.

But a few years ago, still more difficult appeared the realization of the construction of a railroad across the continent of Africa, beginning at Cairo and ending at Cape Town; nevertheless, to-day it is no longer a matter of doubt that within a relatively short time that road will be in operation. The existence of the great railroad of our continent, destined to bind together all the Latin-American republics, would constitute their principal element of prosperity and stability, and, at the same time, would make New York the commercial and financial center of the whole of this extensive and rich hemisphere. Its power and preponderance would be so advanced that in the next century we would see New York disputing with London the predominance which it has maintained in the business world, and especially in financial matters, during the century about to close.

ECONOMIC PROGRESS OF URUGUAY.

Minister Finch writes from Montevideo, April 19, 1899:

Newspapers of Montevideo are publishing statistics referring to the exports and imports of Uruguay. I copy from one of these publications the following:

It is often said that this Republic is in a stagnant state as regards economic progress, or that at all events it does not advance as its resources would warrant. These discouraging assertions are mainly based on the statistics of foreign commerce.

Divided into periods of five years each, the official values of imports and exports for the last twenty years have been:

Years.	Imports.	Exports.	Total.
1879-1883.....	\$91,841,000	\$103,909,000	\$195,750,000
1884-1888.....	124,111,000	120,502,000	244,613,000
1889-1893.....	126,240,000	135,669,000	261,909,000
1894-1898.....	119,012,000	156,020,000	275,032,000

The imports show but slow progress, and even retrogression. There was a leap forward in 1884-1888, but in the next period the advance was only \$2,000,000, and in the fourth there was a positive decrease. This, however, should not be regarded as a symptom of economic retrogression, for it is well known that from

year to year new industries are being established and developed in the country, which diminish the consumption of foreign merchandise. Among the items of importation which tend to disappear may be mentioned leather goods (boots, shoes, etc.). The movement in these has been as follows:

1879-1883	\$694,000
1884-1888	457,376
1889-1893	196,793
1894-1898	220,000

In the year 1887 alone the importation of this class of goods was \$321,000, while in 1898 it did not reach \$57,000. It should be remembered that this heading includes not only manufactured goods, but also raw materials employed in the home industry, the importation of which increases yearly and is now from \$30,000 to \$40,000 a year, against only \$1,000 twenty years ago.

The economic movement is most accurately reflected in the table of exports, which show a steady progress, the difference between the first and fourth periods being \$52,000,000. There is no doubt that the productive power of the country increases, and therefore there is no basis for the pessimist conclusion that we are in a stagnant condition. In order to illustrate more forcibly this expansion of forces, we will select two items, namely, wool and agricultural produce. The embarkation of wool for the last twenty years has been as follows:

Years.	Quantity.	Value.
	<i>Kilograms.</i>	
1879-1883	105,898,000	\$24,747,000
1884-1888	152,163,000	32,369,000
1889-1893	150,041,000	40,310,000
1894-1898	225,461,000	52,715,000

The exportation of this article has thus been more than doubled, both as regards quantity and value. The following is the table of the value of the agricultural produce exported in the same periods:

1879-1883.....	\$2,546,000
1884-1888.....	4,247,000
1889-1893.....	2,581,000
1894-1898.....	14,219,000

In the first three periods, the exportation was stationary and even retrogressive; but in the fourth, which corresponds to the development of the national agriculture, the production increased considerably and reached a figure exceeding the total of the previous fifteen years. And, so far from this high level being lost, it is being well maintained, and in all probability will yet be exceeded. Given these facts, it must be agreed that our country, far from being stagnant, has achieved real progress, in spite of all the political difficulties with which it has been struggling for many years.

Another local publication, referring to the above article editorially, says:

We can not agree with it, however, in taking the increase of production or exportation as the only or even the chief index of economic progress. The Republic

might be able to export the wealth of all the Indies, but would yet be making but slow economic progress if the riches thus acquired were not translated into commercial activity by a corresponding increase in consumption.

Although the productive and exporting power of Uruguay has increased, her consuming power, as marked by the imports, has remained practically stationary; in fact, it has decreased in relation to the increase in the population, though that likewise has not been rapid. The commercial movement per head will be found to be less to-day than it was twenty years ago. The money gained by the additional production has contributed little or nothing to the national prosperity and development, but has mostly been absorbed by official debts and the expenses of civil wars. This is not, and is not likely to be for many years, an industrial or manufacturing country, and the growth of home industries has been relatively too insignificant to atone for the stagnation in importation. The country may produce more, but the people do not consume more—probably they consume less—whether in necessities or in luxuries, and so long as this is the case it can not be said that the country makes real economic progress.

Minister Finch says, in communications dated April 10 and May 8, 1899, that the customs receipts of Montevideo for the month of March amounted to \$1,063,183, against \$1,221,432 for 1898 and \$732,527 for 1897. In April the receipts were \$1,046,916, against \$1,018,950 in 1898 and \$702,361 in 1897. A local paper comments on the figures for March as follows:

These receipts show the improvement which we had a right to expect from the combined circumstances of return to constitutional government, cessation of political agitation, and the fact that the autumn and winter goods are arriving. The receipts compare favorably with those for any month of March for the last six years, leaving out those of 1897, which were exceptionally depressed by the outbreak of civil war. The figures of imports are unusually high, and if exportation had not been unusually slack for the time of year, the total receipts would probably have beaten the record for March. In this connection, we may add that, since the Easter holidays, there has been exceptional activity in nearly all the wholesale and importing houses of the capital, orders for goods coming in from the interior faster than they can be filled and keeping the clerks busy until late hours of the night. In one day, the Central Railway transported no less than 700 tons of merchandise to the interior, beating all its previous records. This great activity is a good sign and may fairly be regarded as a forerunner of the general revival which the Republic has so long been awaiting.

EXPORTS AND EXPORTERS OF PUERTO CABELLO.

I have the honor to transmit herewith statistics covering the exports and exporters of the consular district of Puerto Cabello. It has cost me many days of hard personal work, but the result is so satisfactory that there is little room for complaint. The books and papers of the custom-house have been carefully examined, and the information given is the result of such examination.

Table showing the various products exported from Puerto Cabello during the quarter of the year ended March 31, 1899, the countries to which the products were exported, and the names of the exporters.

Exporters.	Whither exported.						
	United States.	Cuba.	France.	Germany.	Italy.	Spain.	Total.
<i>Coffee.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Ascher & Co.....	25,600		53,465				79,065
E. Berrizbeitia.....			788,785	57,064			845,849
Braschi & Sons.....	17,818		73,430	253,706		4,924	349,878
Boulton & Co.....	91,000		363,191				454,191
Blohm & Co.....	87,424		817,804	211,700	17,906		1,134,834
Carbon & Co.....			10,266		11,900	2,700	24,866
A Ermen.....	510,165		382,683	273,078		18,027	1,183,953
M. Frey.....			29,633				29,633
Kolster, R. & O.....	38,100		290,943	110,181			439,224
Leseur, Romer & Baasch.....	160,541		1,268,804	186,456			1,615,801
Mestern & Co.....			578				578
Rivas, Fensohn & Co.....			264,334	16,482		20,550	301,366
Total.....	930,648		4,344,006	1,108,667	29,806	46,201	6,459,328
Value, United States currency.....	\$74,660		\$606,379	\$152,418	\$4,822	\$6,643	\$844,931
<i>Cacho.</i>							
Carbon & Co.....					4,500		4,500
E. Berrizbeitia.....				893			893
Gonzales & Co.....			3,364				3,364
Total.....			3,364	893	4,500		8,757
Value.....			\$183	\$58	\$216		\$457
<i>Cocoa.</i>							
Berrizbeitia.....			10,141				10,141
Braschi & Sons.....			3,451				3,451
Blohm & Co.....			3,555				3,555
A. Ermen.....			6,541				6,541
M. Frey.....			10,097				10,097
Leseur, Romer & Baasch.....	5,500		46,460				51,960
Rivas, Fensohn & Co.....			7,038				7,038
Total.....	5,500		87,283				92,783
Value.....	\$1,161		\$27,472				\$28,633
<i>Cassava.</i>							
A. B. Torres.....		1,448					1,448
Value.....		\$23					\$23
<i>Cattle.</i>							
Braschi & Sons.....		*1,318					*1,318
Boulton & Co.....		*2,340					*2,340
E. Ermen.....		*5,372					*5,372
A. B. Torres.....		*739					*739
All other.....		*1,858					*1,858
Total.....		*11,627					*11,627
Value.....		\$353,963					\$353,963

* Head.

Table showing the various products exported from Puerto Cabello, etc.—Continued.

Exporters.	Whither exported.						
	United States.	Cuba.	France.	Germany.	Italy.	Spain.	Total.
<i>Copra.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
F. Brandt.....				11,357			11,357
M. Frey.....				34,900			34,900
Gonzales & Co.....				2,898			2,898
R. O. Kolster.....				6,826			6,826
Total.....				55,981			55,981
Value.....				\$3,166			\$3,166
<i>Dried or jerked beef.</i>							
M. Frey.....		62,681					62,681
Value.....		\$5,037					\$5,037
<i>Divi-divi.</i>							
Carbon & Co.....					45,300		45,300
Value.....					\$966		\$966
<i>Oxhides.</i>							
Adolfo Acosto.....	8,738						8,738
E. Berrizbeitia.....	47,600						47,600
Braschi & Sons.....	95,263						95,263
A. Ermen.....	58,079						58,079
R. & O. Kolster.....	6,373						6,373
Leseur, Romer & Baasch.....	35,047						35,047
Total.....	251,100						251,100
Value.....	\$36,648						\$36,648
<i>Goatskins.</i>							
Braschi & Sons.....	14,618						14,618
A. Ermen.....	19,673						19,673
Leseur, Romer & Baasch.....	4,050						4,050
Total.....	38,341						38,341
Value.....	\$11,806						\$11,806
<i>Deerskins.</i>							
E. Berrizbeitia.....	183						183
Braschi & Sons.....	862						862
A. Ermen.....	388						388
Total.....	1,433						1,433
Value.....	\$196						\$196
<i>Oranges.</i>							
A. B. Torres.....		698					698
Value.....		\$1					\$1
<i>Tonka beans.</i>							
Leseur, Romer & Baasch.....	485						485
Value.....	\$245						\$245
<i>Copper ore.</i>							
Gonzales & Co.....			1,122				1,122
Value.....			\$25				\$25
<i>Timber.</i>							
Gonzales & Co.....				8,312			8,312
Value.....				\$82			\$82

Recapitulation.—Quantity and value of the exports to the several countries.

Articles.	Quantity.	Value.
To the United States:	<i>Pounds.</i>	
Coffee.....	930,648	\$74,669
Cocoa.....	5,500	1,161
Oxhides.....	251,100	36,648
Goatskins.....	38,341	11,806
Deerskins.....	1,433	196
Tonka beans.....	485	245
Total.....	1,227,507	124,725
To Cuba:		
Jerked beef.....	62,681	5,037
Cattle.....	*11,627	353,963
Cassava.....	1,448	23
Oranges.....	698	1
Total.....		358,754
To France:		
Coffee.....	4,344,006	606,379
Cocoa.....	87,283	24,472
Cacho.....	3,364	183
Copper ore.....	1,122	25
Total.....	4,435,775	634,059
To Germany.		
Coffee.....	1,108,667	152,418
Cacho.....	893	58
Copra.....	55,981	3,166
Timber.....	8,312	82
Total.....	1,173,853	155,724
To Italy:		
Coffee.....	29,806	4,822
Cacho.....	4,500	216
Divi-divi.....	45,300	966
Total.....	79,606	6,004
To Spain:		
Coffee.....	46,201	6,643
Grand total.....		1,285,909

* Head.

LUTHER T. ELLSWORTH,

PUERTO CABELLO, April 5, 1899.

Consul.

COPPER AND BRASS IN JAMAICA.

The following is a copy of a letter from Consul Dent, dated Kingston, April 27, 1899, to a Pittsburg correspondent:*

The imports of sheet copper and brass into Jamaica are very small, and come mostly from England. I append a memorandum showing the importations last year This memorandum shows the values

*To whom Advance Sheets have been sent.

also, from which the prices here can be calculated, though I am informed the price is regulated by the value in England. The ordinary English measurement is used; not the metric system. Sheet copper for guttering is imported from England in limited quantities in lengths of 5, 10, and 100 feet (the latter made up of 10-foot lengths seamed) in widths of 18, 20, 22, and 24 inches; weight, 16 ounces to the square foot. When the sugar estates were more numerous and more prosperous, sheets of copper were imported for repairing stills and teaches, in thicknesses from one-sixteenth to three-eighths of an inch; sizes of sheets, 6 by 2 up to 8 by 6 feet; but it is now very rare that any are required, and the importation in this line has almost ceased. Copper for sheathing ships' bottoms is no longer used here, being superseded by yellow metal. Yellow sheathing metal is used here in limited quantity; sheets are 4 feet by 14 inches, 12, 14, 16, and 18 ounces to the square foot. For any further information of this character correspondence may be addressed to Messrs. E. Lyons & Sons, or D. Henderson & Co., Kingston, Jamaica.

Imports of brass and copper into Jamaica.

Articles and whence imported.	Quantity.	Value.		
	<i>Tons. Cwts.</i>	<i>£</i>	<i>s. d.</i>	
Brass:				
United Kingdom.....	3 10	281	3 6	\$1,368.34
United States.....	0 5	21	6 2	103.64
Copper:				
Unwrought—				
United Kingdom.....	6 10	245	11 3	1,105.03
United States.....	0 1	1	13 0	8.03
Wrought (mixed or yellow metal)—				
United Kingdom.....	17 15	452	17 4	2,203.88
United States.....	8 15	235	17 4	1,147.84
Unenumerated—				
United Kingdom.....	2 8	608	12 11	2,961.97
United States.....	0 10	31	3 6	150.71
Crucible pots for melting—				
United Kingdom.....		7	11 2	36.78

COTTON-GOODS TRADE IN HAITI.

In reply to inquiries by the Philadelphia Museums,* Consul Livingston sends from Cape Haitien, under date of May 17, 1899, the following statements of the trade in cotton goods and the openings for United States products, prepared by Dr. Némours Auguste, a local merchant, and by the consular agent at Gonaives, Mr. Woël:

TRANSLATION OF LETTER FROM DR. AUGUSTE.

American cotton tissues could compete to advantage with similar tissues of all kinds manufactured in Europe, and especially in England, if the American manufac-

*Advance Sheets of the report have been sent the museums.

turers knew the commercial customs of each country and would seek to satisfy the public taste. Since there are customs which ought not to exist, but which nevertheless can not be changed, and which it is necessary to follow; since there is a taste which results from these same customs, from the climate, from natural peculiarities, from a certain way of looking at things—it is necessary to put one's self in harmony therewith in order to succeed in all commercial contests. Cotton tissues of the same quality are not dearer [in America] than in England, many having almost superseded similar English articles in outside markets. These are the ones in which the first material is relatively good. This superiority is lost when we reach tissues in which the first material is mediocre. If we add that the cost in good American houses is less than the cost in England, and that the freight is much lower, one sees that even for inferior articles the contest is still possible. American merchandise is well presented. The denims and checks have beautiful labels, agreeable to the eye, of which the English are very sparing. The tissues without stiffening are more popular than those from Europe, and there is a group in which English competition has been entirely eliminated.

Every market has its customs, and nothing is more difficult than to cause it to change its routine. We desire in Cape Haitien that our merchandise be cut exactly in pieces of 25 yards or in half pieces of $12\frac{1}{2}$ yards. We receive certain articles, such as denims, checks, and gray domestic, cut in this way, but we can not yet obtain in pieces of these dimensions one article of the greatest importance, namely, *indiennes* (printed calico), the consumption of which is considerable, and would be much greater if we could always supply our customers with pieces of 20 and 10 *annes* (25 and $12\frac{1}{2}$ yards). The manufacturers are quite willing to cut in half pieces of 51, 53, and 55 yards, but they make us pay 3 cents for the cutting, while in England they only make us pay 1d. for cutting pieces of $12\frac{1}{2}$ yards, and make no extra charge for cutting pieces of 25 yards.

Blue denims.—American denim has almost entirely driven the English article from the Haitian market. It has more regular designs, is made with better thread, and is cheaper. But what seems strange is that the Americans make an unimportant difference in price between denims of 28 inches and denims of 23 inches. This difference is more considerable in England. Now, we need a denim of 23 inches, for we are obliged, in making our orders, to conform to our customs tariff. This is based upon the width of tissues, and a tissue of 23 inches does not pay the same duty as one of 28 or 29 inches.

Checks.—Checks are the second article of great importance in which American manufacturers compete successfully with the English. The American article is better folded, has a prettier label, and its appearance is more attractive. It is without stiffening, which is beginning to please the public; and perhaps, although the price is the same, the quality is better. The designs are good and the tints are appreciated. Here, again, appears the question of width. Makers frequently offer us checks of 28 inches which, notwithstanding the reasonable price, we are obliged to refuse, because they are subject to too high a customs duty. It is necessary to have pieces of 23 and 27 inches.

Indiennes.—The small American *indiennes* have long since won an important place in Haitian consumption, and the market continues to widen. This is due primarily to the quality of the goods. The English *indiennes* of narrow width and low price were formerly a rather poor article. The designs were bad, the print detestable, and there was a stiffening which completely masked the tissue, which, after the first washing, was nothing more than a sieve. The success of American 24-inch *indiennes* is easily understood. They are of good tissue, with new designs carefully made, and printed acceptably. So it happens that merchants to-day give orders by the thousand pieces; and I have no hesitation in saying that if some

exigencies of this market could be taken into account, our orders would be still more important.

In the first place, the cutting. We need pieces of 25 yards and $12\frac{1}{2}$ yards, for the people can not accustom themselves to irregular pieces, and often refuse to buy on account of an excess of 1 or 2 yards in a piece.

Second. The width of 24 inches is insufficient. In order to put ourselves in accord with our customs tariff, we require pieces of 27, 28, 30, and 31 inches. They should be of fine quality.

Third. The colors are not always such as we should like to have in our assortment. The Haitian woman has a special taste for mauve, and the difficulty of obtaining this in America obliges us to apply to England.

Fourth. Our choice is rather limited. Our correspondents present us assortments of cases, among which we are obliged to make a selection of designs, good or bad, for importation. We have to take the case as it is. It is the taste of the manufacturer, and not ours, that we are obliged to follow. It is otherwise in England, where we make our assortment, distributing orders, and where they only force us to take from 300 to 400 yards of each design. If the American manufacturers would take into account these desiderata of the Haitian market, they would wrest from England the whole market for indiennes.

White and unbleached cotton.—This ought to be the triumph of American manufacturers, but it is in this line that the English hold the chief position. In a general way the stiffening (*apprêt*) is better in England, and that not only in the inferior but in all qualities. The bleaching is perfect. Where it is a question of ordinary tissues, in which the stiffening plays an important rôle, the English excel. Their prices for these kinds are also less high, which is due no doubt to the inferior cotton they employ. This superiority disappears in the "gray drill" and the "gray domestic" bleached and of larger thread, in which the English compete but little. It is almost impossible for us to obtain in England soft gray drills without stiffening, sufficiently white, which can bear comparison in the market with the American article. The lines in which American manufacturers fail are the inferior qualities of small width, of which the consumption is very large—gray domestic of 24 and 25 inches at 2 or $2\frac{1}{4}$ cents, and white shirting of the same price. The American gray domestic is delivered whiter than the English, which is due no doubt to the better quality of the cotton employed; this is a cause of superiority, and at the same price the American article should be preferred.

The foregoing are the principal articles which the large importers procure from the United States, and of which the interior sales are the greatest. A number of other tissues might be added, but it is unnecessary to mention them. It is better to occupy ourselves with articles which the Americans do not yet manufacture, or which they have not sent us up to the present time:

Head kerchiefs (*mouchoirs pour tête*). The headdress of the lower class woman (*femme du peuple*) of Haiti is a kerchief folded around the head, of which there are four types:

- (1) The kerchief of blue and white squares, called "romal handkerchiefs."
- (2) The white kerchief.
- (3) The imitation madras kerchief.
- (4) The kerchief of printed cotton, with soft stiffening, imitating, more or less nearly, madras designs.

All these kerchiefs are from 30 by 31 to 33 by 34 inches—large enough so that the knot may be tied without difficulty. The romal handkerchiefs are the headdress of the lower class of women, and cost 1s. 10d. (44.6 cents) per dozen. The white kerchiefs from Manchester or Glasgow cost from 2s. 6d. to 3s. 3d. (60.8 to 79 cents) or more. They are plain or embroidered in one corner, with or without

openwork (à jour). They carry an emblem of mourning. The imitation madras handkerchief was made to take the place of the more expensive genuine article. It is generally a Swiss product, costing from 6 to 7½ francs (\$1.16 to \$1.45). These are called here "sham madras handkerchiefs." The "sham batiste handkerchiefs," so called because they are now made of cotton instead of thread and batiste, as formerly, have a considerable consumption. The ordinary headdress of all classes is an article formerly received from Belfast, where it was made only of thread or a mixture of thread and cotton. To-day it is also made in Glasgow and Manchester, although the Belfast article retains its superiority on account of the mode of preparation. The price varies from 3s. to 3s. 6d. or 3s. 7d. (73 to 85 or 87 cents). The handkerchiefs are shipped in assorted dozens.

Victoria lawn, which we call here imitation batiste or white muslin, is shipped in large quantities, in pieces of 10 yards, at the ordinary price of from 1s. 10d. to 2s. 6d. (44.6 cents to 60.8 cents).

Muslin, plaid and openwork (à carreaux et à jour), is folded and shipped in the same manner as the Victoria lawn. The price is the same. Finer articles, however, are imported at from 6½d. to 7d. (13 cents to 14 cents) per yard.

Shoes.—American shoes will displace European shoes when the American manufacturers wish it and when they follow the methods of their French competitors. The latter sent here representatives charged with studying the local peculiarities. On their return to France, special forms for Haiti were made; so no shoes suit the Haitians as well as those of a few French houses, especially Fanien for men and Hattat for women. Beside the form of the foot, it is necessary to study Haitian taste, and it is there that the contest with French houses will be most difficult. We have in stock some American boots for women, very pretty and considered elegant in Paris, but not one of our customers has ever found a pair to suit her.

In conclusion, we believe that a study of the Haitian market would be of considerable interest to the manufacturers of the United States. They would find here a good opening and would displace their English competitors at almost every point. What we advise is for them to make a visit to the place; their eyes will inform them better than the longest reports they can receive how to modify to their profit the balance of Haitian importations.

REPORT FROM CONSULAR AGENT AT GONAIVES.

A few years ago, apart from such articles as salt beef and pork, salt and pickled fish, flour, soap, and lumber, American goods were hardly represented in this market. But during the last twenty years, cotton goods from the United States have dealt a hard blow to the monopoly enjoyed up to that time by Manchester products.

American articles, such as denims, prints, bleached and unbleached cottons, checks, and ginghams, have gradually crept in, and now they have gained considerable ground on account of their good quality, competing advantageously with similar English articles in which the inferior quality of the tissue is often concealed by artificial preparations or stiffening, which is lost in the first washing. The consumers have learned quickly to have confidence in the American goods, even when they cost a little more. These cottons would have succeeded fully, if the manufacturers had observed certain small details, which the customs of the market have rendered necessary. For instance, the pieces of goods should measure exactly 25 or 12½ yards; the latter dimension has become quite popular lately and represents more than half of the imports.

As regards prints, American fabricants put too much uniformity and not enough colors in their designs, and not enough designs in their assortments.

Moreover, the packing would be more suitable if cases, instead of containing from 2,500 to 3,000 yards, held 625 yards, viz, 25 pieces of 25 yards, or 50 pieces of

12½ yards. The bleached and unbleached cotton checks or gingham should also be packed in similar trusses of 625 yards and repacked in bales of 5 or 6 trusses.

Manchester still holds the first rank for blue and white handkerchiefs and union madras handkerchiefs, 34 inches, which are imported here in very large quantities, being used by the country people and some city women as head gear. The superior qualities of union madras handkerchiefs are specially made at Belfast, in Ireland. I can also mention union and linen goods, such as brabant, batiste, cambrai, platille, drills, and ducks, the monopoly of which belong to the Irish manufacturers.

There are also white woollens for dresses, which come from France and Germany. I think that Americans could find a very important market in Haiti for hosiery, hats, shoes, tinware, hardware, earthenware, pottery, glassware, etc.

The transactions between the two countries are regulated by too short terms of credit. While French or English shipments call for payments in six months' time, the American invoices are to be paid in sixty days, or, very rarely, in ninety days. The Haitian importer, whose local trade is generally based on credit—in most cases without even a limit of time—is naturally inclined to listen to the offers of the travelers that European manufacturers send to the country. American houses should also send travelers who can speak the French language, with samples, to offer their products in this country. I am of opinion that a larger portion of the Haitian trade would go to the United States if there were some American banking houses making a specialty of exchange between the two countries. French, German, and English houses almost monopolize the banking business in Haiti, and I consider the establishment of such facilities with the United States an essential factor in trade. Sometimes, interested newspapers or Europeans established in Haiti try to exclude competition by representing the economical condition of the country as bad. When one considers how the European banking houses at Port au Prince and other ports of the Republic prosper, it is a matter of astonishment that no American house is to be found in this branch of business, where its presence could not fail to increase our trade.

NOTES.

Russian Exhibition of Dairy Products and Machinery.—Consul-General Holloway sends from St. Petersburg, May 13, 1899, programme of the exhibition of dairy products and machines and appliances for use in dairy work, to be opened in St. Petersburg September 1, 1899, and to continue one month. The programme reads:

The exhibition consists of the following divisions and classes:

Division I.—Dairy products.

Class 1.—Milk, cream, curds, sour cream, and other products.

Class 2.—All kinds of butter.

Class 3.—All kinds of cheese.

Class 4.—Accessory products: koumiss (fermented milk of mares), kefir, gaseous milk and other kinds of it, milk brandy, condensed and dry milk, whey, etc.

Division II.—Dairy apparatus and machines.

Class 5.—Apparatus and machines to work the milk: separators, churns, butter dryers, cheese kettles, pasteurisators, elevators, etc.

Class 6.—Apparatus for scientific and practical analysis of milk, butter, and other products.

Division III. Class 7.—Exhibition of the products under work.

Division IV. Class 8.—Tasting division.

Division V. Class 9.—Scientific division: investigations, descriptions of farms, herbaria, etc., collections, models, apparatus, adaptations for learning, reports of the dairy—schools and learning books.

Division VI. Class 10.—Auxiliary substances: salt, color, ferment, abomasums, thermometers, psychrometers, etc.

Division VII. Class 11.—Dairy buildings: plans, models, special adaptations for cooling, ventilating, and heating.

Division VIII. Class 12.—Conservation and transportation of dairy products: ice wagons, cooling rooms, magazines, and samples of different kinds of packing butter, cheese, etc.

The dairy products are to be of Russian origin; the exhibition is international in regard to machinery, apparatus, kinds of packing, and means for transportation. The entrance fee is 4s. (97 cents) per square meter. Articles must be delivered to the exhibition not later than five days before opening, with the exception of machinery, which must be sent twenty days before. There will be daily demonstrations of the fabrication of dairy products and the working of machines.

Under date of June 2, 1899, Consul-General Holloway writes that he has been informed that the Minister of Finance will allow a duty-free entry of foreign exhibits for the international section of the dairy exhibition. The exhibits which will be sold at the exhibition, as also those which will remain in Russia after it is closed, will have to pay the regular duty levied on such articles.

Mechanical Power in Germany.—Under date of Chemnitz, May 20, 1899, Consul Monaghan transmits the following statistics relative to horsepower machinery and engines in Germany, and the opportunity for the increase of sales of American makes:

The employment of motors in industries is rapidly increasing in Germany. From 1875 to the present time the number of concerns using motor power has increased sevenfold, the horsepower three-fold or fourfold. According to the census of 1895, 3,421,194 horsepower was employed. Of this power, 2,715,078 was put down to steam, 629,065 to water. The 3,421,194 horsepower represents only the real power put forth, not the indicated or possible power. It seldom happens that an engine or motor is used at anything like its indicated capacity. The power used in agricultural pursuits, railroad, river, harbor, and coast transportation, etc., also the great central stations that supply power to other concerns, is not taken into account in the foregoing. The German railroads employed in 1895 16,377 locomotives (16,107 on the wide-gauge roads and 270 on narrow gauge). Giving the wide-gauge-road engines an average of 450 horsepower, and the narrow gauge 150, we get for the Empire's locomotives 7,288,000 horsepower. Among the farmers of Germany (in 1894-95) 259,364 farms used steam thrashers, 1,696 steam plows, and 26,000 milk centrifugals with power. Ocean steamers (1,061) had, in 1895, 801,750 horsepower; river, harbor, and coast steamers (1,530) had 171,360 horsepower. These figures are all for 1895, and there has been a constant increase since. I am not sure that there is not a field here for our better class high-grade engines. The tendency everywhere is toward steam, water, electrical, and gas powers. Engines, if cheap enough and good enough, ought to go as well here as with us. The demand is not decreasing. Agricultural machines, most of which had their origin in our country, are imitated; how successfully, only one familiar with the machines can say. If we work half as hard as do Germans; we can conquer markets in Russia, the East, South Africa, Australia, etc., where our machines are almost sure to succeed, price for price, against all others.

Slate Trade in Rheims.—The following extract is from a letter to a Pennsylvania firm* by Consul Prickitt, of Rheims, dated May 20, 1899:

The cost of roofing slate, laid down in Rheims, is, for the best qualities, 24 francs (\$4.63) per thousand. The size of the pieces is approximately 12 by 7½ inches. As laid here, it takes fifty-four

* To which the original has been forwarded.

pieces to cover a space 39 inches square. This slate weighs 350 kilograms (770 pounds) per thousand. The duty on roofing slate in France is 1.40 francs (27 cents) per 100 kilograms (220 pounds). Polished slate is charged 4 to 5 francs (77.2 to 96.5 cents) per 100 kilograms. The principal slate quarries of this district are at Fumay and Signy le Petit. The slate of Fumay is the most valuable, being of a beautiful violet color and having a fine grain. Heat and cold do not affect it. It sells for about 2 francs (38.6 cents) more a thousand than the roofing slate from other quarries. The principal dealer in this city is Victor Druart, Chaussee du Port, No. 37. Slate is exported from France in large quantities, and but little is imported. It is used in this country chiefly for roofing. I do not think this market promising for the introduction of roofing slate from America.

Antwerp Ivory Market.—Consul-General Lincoln writes from Antwerp, May 5, 1899:

At the second quarterly sale held on the 2d and 3d instant, the ivory offered and sold was as follows: About 133,411 pounds Kongo hard, 9,472 pounds Kongo soft, 18,026 pounds Angola, 9,918 pounds Gaboon, 1,221 pounds Zanzibar soft, and 994 pounds Senegal and Gold Coast. The total was about 173,042 pounds, as compared with 128,568 pounds in 1898, 162,214 pounds in 1897, and 146,682 pounds in 1896. The bidding was very active, the prices established showing an advance of from 9.6 to 19.3 cents per 2.204 pounds for the heavy and medium weight tusks and 19.3 cents for the scrivailles. For tusks for bangles, however, there was a fall in price of about 19.3 cents. There was a considerable increase in the value of soft ivory, varying from 57.9 to 96.5 cents per 2.204 pounds. Stock on hand this day is about 206,075 pounds, against 127,832 pounds in 1898, 185,136 pounds in 1897, and 236,930 pounds in 1896. The next quarterly sale will be held on August 1.

Exclusion of Certain American Products from France.—Under date of April 29, 1899, Consul Skinner, of Marseilles, transmits the following translation of a decree excluding certain American products from France. Although the decree was issued some months ago, it was only published in Marseilles on the date of its transmittal by the consul.

To the customs authorities.

I transmit to the service the duplicate of a decree of November 30 last which determines the measures to be taken to prevent the invasion of France by an insect known as the San José scale (*Aspidiotus perniciosus*), the presence of which has been noted at Hamburg in shipments of American fruits.

In virtue of article 1 of this decree, trees, bushes, products of nurseries, cuttings, and all other vegetables or parts of living vegetables—also their débris—coming from the United States are interdicted from entering or passing in transit through France, either directly or through the bonded warehouses. This interdiction extends to cases, sacks, and other packing materials serving or having served in the transportation of the articles named.

The same decree stipulates in article 2 that when the presence of the insect shall have been noted in shipments or débris of fresh fruits, the shipment of said fruit and its packings shall be prohibited. Instructions will be furnished later concerning the special measures to be taken in applying article 2 in question.

I add that by a new decree of February 3, the dispositions of the decree above are extended to Algeria.

Sugar in Spain.—Mr. Mertens, in charge of the consular agency at Valencia, under date of June 5, 1899, says:

Since the loss of her colonies, Spain's sugar factories, with a yearly production of about 60,000 tons, are unable to satisfy the public demand, which amounts in all Spain to about 100,000 tons of sugar during the year. A high prohibitive duty of 102¼ per cent on foreign sugar protects the home industry and stands in the way of sugar dealers and consumers. For this reason, a union of tradespeople and merchants of the different cities of Spain have petitioned the Spanish Government to reduce the import duty to 50 per cent, which would afford a fair protection for the refineries and at the same time permit the import of sufficient sugar to supply the demand. While this petition meets with great opposition from the refiners, still, in view of the need of sugar and the small chance of increasing either the number of factories or their output in the near future, the Spanish Government will probably reduce the duty, more especially as this will add to the customs income of the country and do away with the incentive for smuggling. As soon as this reduction becomes a law, our dealers in refined sugar should be ready with samples to secure contracts, before the competition with other countries becomes too keen.

Breeding of Reindeer in Norway.—Under date of May 4, 1899, Consul Nelson, of Bergen, reports that a company has been formed in Telemarken, eastern Norway, for breeding and raising reindeer on a large scale. At the head of this undertaking is Nils Böhnen, one of the teachers in the people's high school, and for a time he will personally superintend the industry. The company has already bought 2,400 deer for 28,000 kroner (\$7,504), and by degrees they will increase the herd to between 3,000 and 4,000 deer. When this number has been reached, the company will be enabled to kill about

1,000 deer every year without diminishing the herd. When slaughtered, a deer is worth about 20 kroner (\$7.36), and there are good markets for this meat, especially in France and Belgium. The company also hopes to induce England to purchase it. In order to prevent the glutting of the market during the winter season, a canning plant will be attached to the farm for the purpose of preserving the meat. This hermetic factory will also can red char (a species of small salmon) and ptarmigan. The company controls 50 to 60 square miles of wild mountain land.

Demand for Dairy Machinery in Belgium.—Consul Le Bert writes from Ghent, May 19, 1899:

I have this day received from Mr. A. Heynssens, rue Haut Port 12-14, a letter asking the names and addresses of important firms in the United States manufacturing dairy machinery, such as churns, separators, butter workers, dairy articles, refrigerators, cheese-making machines, etc. He desires firms not as yet represented in Belgium and asks that catalogues and circulars, with conditions of sale, be addressed directly to his firm. This house is one of the oldest and largest of the provinces of East and West Flanders handling the line of goods mentioned. Upon inquiry, I learn that none of these articles are manufactured in Belgium.

The importations to both Flanders are chiefly from England and Denmark. Considering the vast dairy industry of the Flanders and our improved apparatus, there should be, with proper representation, a wide field for our manufacturers of dairy machinery and utensils.

Seal Fisheries of Japan.—Consul-General Gowey sends from Yokohama, May 4, 1899, a clipping from the Japan Times relative to the seal fishery of Japan. In connection with the facts therein stated, says Mr. Gowey, showing the growth of this industry in Japanese hands, it is significant to note that there are no longer any foreign vessels fitted out here for seal or otter hunting. Only a few years ago, a large fleet of American and British schooners so employed made their headquarters at Yokohama. The clipping reads:

The news given by us a few weeks ago concerning the prospect of this year's seal fishery is apparently well founded. About thirteen Japanese sealing craft started this year from Hakodate and other places, and some of them have come back laden with a large number of skins. One that entered Oginohama about the 11th ultimo brought back 340 skins, while three that reached Hakodate about the same

time had between them some 580. The reports these sealers have brought are satisfactory. Recently, it was very rare for a sealer to catch as many as 200 from the commencement of the season to the first week of April; but this seems to be the rule, not the exception, this year. As over forty days remain, counting from the 10th ultimo, the year's record is expected to be something extraordinary. We do not know how the foreign sealers have fared, but probably they have not done badly where their Japanese confrères have been so successful.

Direct Steamship Connection with Syria.—Consul Ravndal writes from Beirut, May 26, 1899:

American manufacturers and exporters, as well as importers, will be interested in learning that Barber & Co., Produce Exchange, New York City, will dispatch a steamer direct for Beirut on the 10th proximo, which, after discharging at this port, will receive cargo for New York, touching on the way home at Alexandria. According to information in my possession, it is more than likely that this steamship agency will have steamers calling at Beirut regularly once every six weeks, and, if this proves true, a lively interchange of goods may be expected. The consular representatives of the United States in the Levant have for years been working for direct transportation facilities, as essential to the development of United States trade with countries of the eastern Mediterranean. Now that this seems to be realized, all concerned should encourage the promoters, in order to make the service permanent and a success. Steps are now being taken towards the establishment of a sample room in Beirut, to facilitate the introduction of American goods.

Demand for Shipping in British Columbia.—Consul Dudley sends an undated report from Vancouver (acknowledged by the Department June 17, 1899) as follows:

I have for several months observed the fact that very few sailing vessels are coming to this port to load lumber for China, Japan, Australia, South America, and South Africa. When I first assumed charge of this consulate, there were a number of such vessels engaged in this traffic. Many boats are needed here and would be chartered immediately if they could be obtained, as the shippers of lumber find it impossible to secure them. The increase in exports of lumber from Washington and Oregon in part accounts for the change. The large wheat crop of last year and the immense foreign demand has also taken up much of the shipping formerly engaged in the lumber traffic, the owners of vessels preferring to carry grain rather than lumber. If there are sailing vessels on the Atlantic coast

seeking employment, I feel very certain they could obtain it by coming to this coast. The export of coal from Vancouver Island is steadily increasing, and sailing vessels find employment there, although the largest quantity of coal is carried by steamships. Owners of vessels can secure full information by addressing any of the shipping firms at this port, at Seattle, Wash., or at San Francisco, Cal.

New Cotton Mill in Mexico.—Consul Canada, of Veracruz, under date of May 18, 1899, transmits newspaper clippings describing a new cotton mill located in Orizaba, about 82 miles west from Veracruz on the Mexican Railway, as follows:

The company interested in the new concern consists mainly of French capitalists. The capital is \$2,200,000.

Work on the building was commenced December 1, 1896. In the latter part of August, 1898, the first turbine wheel was installed.

The power is derived from a fall in the Rio Blanco—a height of 82 feet—5,000 liters per second. The water is stored up in a tank containing 1,200 cubic meters, moving two turbine wheels of 500 horsepower each. From the turbine pit, 135 feet deep, the water flows through a tunnel 670 meters in length and is used again by the cotton factory at Nogales, another suburb of Orizaba.

The factory occupies an area of 170 square meters. The buildings are lit with 1,200 incandescent lamps and 20 arc lights. The company generates its own electricity.

In addition to the power derived from the turbine wheels, there is a magnificent steam engine of English make; capacity, 450 horsepower. There are 8 Northrop American looms. The balance of the machinery, with the exception of the electrical plant, is English. The electrical part is French.

This factory is now the second largest in the Republic, the largest being that at Nogales. This concern employs some 950 operatives—men, women, and children—but the help so far is almost entirely male, girls and women being scarce in the district.

Germans and Frenchmen are in charge of the printing. Six colors are printed simultaneously, with fine engrossed English cylinders. The capacity of the mill is 1,500 bolts a day.

The mills are turning out various grades of goods, from common manta to prints. At present, they are not making a very high class of goods, but when the help gets more intelligent they will do so.

Mexican Port Dues.—The following, dated May 19, 1899, has been received from Consul Jones, of Tuxpan:

I wish to call attention of shippers to article 13 of the new tariff law that went into effect last October to protect the interior commerce of Mexico. According to this new law, all vessels that enter any Mexican port and wish to proceed with the same cargo or any

part of it, to another Mexican port, or vessels coming in ballast, taking part cargo at one port, then proceeding to another port to complete cargo, must pay the following rates:

	Per ton, gross weight.
Atlantic ports:	
Distance, 60 miles.....	*\$1. 00
Upwards of 60 miles to 360 miles.....	3. 00
Upwards of 360 miles to 500 miles.....	5. 00
Pacific coast:	
Distance, 60 miles.....	1. 00
Upwards of 60 miles to 360 miles.....	2. 00
Upwards of 360 miles to 500 miles.....	3. 00

Two instances of the above ruling—one a cargo of coal, another a cargo of lumber now unloading at this port—have come to my notice.

Match Monopoly in Venezuela.—Under date of May 22, 1899, Minister Loomis transmits from Caracas copy and translation of the law concerning the creation of a match monopoly by the Venezuelan Government. A newspaper article, also sent by Mr. Loomis, says that it is understood that French capitalists have submitted a proposition looking to the control for twenty-five years of the importation, manufacture, and sale of matches. These capitalists are members of the syndicate that has similar monopolies in Colombia, Bolivia, Guatemala, and other countries. The law provides that the prices for the matches are to be fixed by the Government, never to exceed present prices of any particular brand. The existing factories will be closed, the Government indemnifying them in gold, giving them six months in which to dispose of their stock. The Government can lease the business for a period not to exceed twenty-five years. They are to manufacture matches equal to the best consumed. Until the plant is installed, the syndicate will be permitted to import from its shops in Europe. Duties on material imported are to be paid in accordance with the existing tariff schedule. The syndicate is to pay the Government 600,000 bolivars (\$115,800) for the privilege and shall deposit in the Credit Lyonnais 100,000 francs (\$19,300) as a guaranty for the fulfillment of the contract.

New Venezuelan Tariff.—Minister Loomis writes from Caracas, under date of May 22, 1899:

The Venezuelan Congress, which adjourned on Saturday last, enacted a new tariff law; but, owing to the numerous amendments

*The charges are presumably stated in Mexican currency. On April 1, 1899, the value of the Mexican dollar was estimated by the United States Director of the Mint at 47.2 cents.

made to the original bill, it is not possible for me to get a corrected copy for transmission by this mail. It can be said, however, that there will be an average increase of 25 per cent on existing duties, a very few articles—flour among them—being excepted. In addition to the advance in duties made by the new law, power is given the President to add 25 per cent more to any or all of the new schedules, as he may see fit. In short, the new law makes it possible for the President to regulate the tariff pretty much as he deems best. The new duties will probably not be imposed for sixty or seventy days. No date, I think, has been fixed for putting the tariff into effect.

Grasshoppers in Algeria.—Consul Skinner, of Marseilles, under date of May 4, 1899, transmits the following information:

Reports from Algeria indicate that standing crops will be seriously damaged and in some cases destroyed by the clouds of grasshoppers now moving in a northerly direction. Ten thousand francs (\$1,930) have already been placed at the disposal of the general of the division for the first expenses incurred in fighting against the invasion, and steps have been taken to secure \$38,600 additional for the same purpose. Near Biskra 3,200 camels are being employed in the transportation of inflammable material, which is being burned where deposits of eggs are found. In all parts of the colony men are at work plowing up eggs and destroying them. It is hoped that the energetic measures being taken will prevent a now menaced catastrophe.

The Algerian wheat crop of 1898 was estimated at 24,118,000 bushels. The exports of cereals from the colony during 1897 were as follows, in tons: Wheat, 54,178; corn, 971; barley, 33,492; oats, 32,781; flour, 2,826.

Demand for Locomotives in Tunis.—Consul Skinner writes from Marseilles, June 8, 1899:

I learn to-day from Tunis that the Compagnie des Phosphates et du Chemin de Fer de Gafsa, a corporation engaged in extensive enterprises in that protectorate, is in the market for all sorts of rolling stock, including locomotives, and that proposals have already been invited in England. I think that it is not too late for American manufacturers to compete for this order if prompt action is taken. The address of the company is 60 rue de la Victoire, Paris, and for cabling purposes it may be addressed as the "Compagnie Gafsa."

Change in Russian Calendar.—Consul-General Holloway sends the following from St. Petersburg, May 13, 1899:

The Russian Government has, after many years' discussion, determined to abandon the old-style or Julian-Greek calendar, which is twelve days behind the now universal system of the Gregorian cycle, and which has been a source of annoyance to Russians doing business with other countries, who were compelled to use both dates, as well as to foreigners trading with Russia. The St. Petersburg Astronomical Society has taken the matter in hand, and with the cooperation of the ministers will appoint a commission to be composed of sixteen persons, nine of whom are to be members of the Astronomical Society, who will arrange all the details. It is expected that the new-style calendar will go into effect in 1901.

Pilotage Dues in Russia.—Under date of May 22, 1899, Consul-General Holloway writes from St. Petersburg:

The Russian Government has raised the pilotage for steamers and sailing ships trading with Cronstadt and St. Petersburg from 60 copecks (30.9 cents) per foot draft to 6 copecks (3.09 cents) per register ton from and to sea. The difference is considerable, amounting to 60 rubles (\$30.90) for a steamer of 1,500 tons loading or discharging in Cronstadt, and 120 rubles (\$61.80) if such steamer goes up to St. Petersburg.

Russian Hogs in Germany.—The importation of Russian hogs into Germany is only permitted in the following places in Silesia: Beuthen, Kattowitz, Myslowitz, and Tarnowitz. Consul Erdman, of Breslau, under date of May 13, 1899, reports the number of Russian hogs imported through these border towns as 5,002, the duty being \$1.19 per head. Of the total imported, 40 were rejected as being measly and one as being affected with trichinæ. These were destroyed, in accordance with law.

Export of Horses from Turkey.—Minister Straus writes from Constantinople, under date of May 18, 1899, that, according to a note verbale from the Ministry of Foreign Affairs in Turkey, the regulations prohibiting the exportation of horses from that country have been removed and a duty of 5 Turkish liras (\$24) will be charged upon each horse exported. As inquiries are made from time to time regarding the export of Arab horses from Turkey, adds Mr. Straus, this information may be of interest.

Invoices for Turkey.—Consul Bergholz, of Erzerum, under date of June 2, 1899, says:

An Armenian merchant here, Missak Venetzian, who has recently been ordering goods from the United States, complains that certain shipping agents in New York have added to the cost of his goods by having an invoice sworn to before a notary public and his signature and seal authenticated by the Turkish consul-general. I would ask the Department to notify exporters that consular invoices are not required by the Turkish customs authorities.

Commercial Work of French Consuls.—The following, dated Lyons, April 29, 1899, has been received from Consul Covert:

Among the many efforts made to increase the trade of France in the Orient is one by which the consuls are to be brought into direct communication with the business men of their country. In pursuance of this plan, the consul-general at Calcutta will hold a reception to meet the business men of Paris at the Ministry of Foreign Affairs. The announcement is made that "he will place himself at the disposition of persons who wish to consider the possible openings for French trade in British India, especially for rails, nails, automobiles, petroleum, velocipedes, textiles, silks, laces, woolens, cottons, jewelry, silverware, watches, clocks, machinery for flour mills, photographic apparatus, and Paris-made articles." The consul at Calcutta will visit several industrial centers in France, for the purpose of discussing the same matters with business classes.

Knife Shields in Germany.—Consul Brodowski writes from Solingen; April 22, 1899:

Millions of knives, razors, etc., are manufactured in this consular district, and the material for the shields is imported from all parts of the world, to the value of tens of thousands of dollars monthly. Any kind of hard wood (walnut excepted), bones of horses and other large animals, deer and buffalo horns, ebony, etc., are used. Cuban ebony and hard woods are preferred, and it seems in general that the American imports give the most satisfaction. A good deal has been lately imported from the Chicago stock yards. The largest firms in this branch here are Wilhelm Flucht and Carl Schürmann. I believe that I could do a good deal to further our export trade in this direction, if fair offers were made to importers here.

Steamship Service Between Singapore and the Philippines.—Consul-General Pratt, of Singapore, under date of April 19, 1899, transmits to the Department copy of a letter addressed by him to General Otis, at Manila, in which he states that upon relinquishing his position in the consular service he contemplates the establishment of a line of steamers under the American flag, to ply between Singapore and the different ports of the Philippines, especially the southern ones, which can be reached with special facility by way of British North Borneo. Such a line of steamers, of sufficiently light draft to enter the shallower island harbors, would, Mr. Pratt thinks, be useful for the transportation of troops and supplies. The boats would, in the first place, be at the disposal of the Government, and serve, secondarily, for the convenience of the public.

Starch in Cotton Mills in China.—Under date of April 28, 1899, Consul-General Goodnow writes from Shanghai to a Utah correspondent: *

No potato starch is used in the cotton mills in China, to my knowledge. One mill here uses about 60 piculs (8,000 pounds) of wheat starch per month and another uses about 1,000 pounds per month of the same. This costs from \$2.50 to \$5 Mexican (\$1.18 to \$2.36 gold)† per picul (133⅓ pounds) delivered. It is necessary to use almost twice as much of this as would be necessary to use of potato starch to accomplish the same result.

Water Filters for China.—Under date of Chefoo, April 22, 1899, Consul Fowler writes as follows:

When in Port Arthur last November, I noticed the soldiers drinking out of large jars, or kongs, water which was unfiltered and certainly dangerous. It occurred to me that if American manufacturers could sell a good cheap filter, or, better still, small condensers for condensing either fresh or salt water, an immense market would be opened to them, not only among the Russian troops, but among the British at Weihaiwei and the Germans at Kyao-chau, not to mention foreigners and even Chinese elsewhere in this Empire, who now depend upon muddy river or rain water for all purposes.

* To whom Advance Sheets have been sent.

† Taking the valuation of the Mexican dollar, April 1, 1899, by the United States Director of the Mint, as 47.2 cents.

Manganese Ore in Japan.—Under date of May 17, 1899, Consul-General Gowey, of Yokohama, writes to a New York firm* in part as follows:

Cargoes of Japanese ore do not run evenly, analyses showing a range of fineness from 28 to 70 per cent, the average being 55 or 60 per cent. Some shipments, of course, have exceeded these grades, but the impression here is that there is always uncertainty in placing an order. Details as to prices, etc., might be obtained from the American Trading Company or Messrs. Browne & Co., Yokohama, or Messrs. Howell & Co., Hakodate.

Hawaiian Representation at the Omaha Exposition.—The Department has received from Consul-General Haywood, of Honolulu, under date of May 26, 1899, copy of a report to the chamber of commerce, recommending that an exhibit of the products of the islands be made at the exposition to be held at Omaha. The exhibit will comprise native fruits and plants, coffee, rice, sugar, etc.; photographs, antiquities, woods, shells, curios, etc.; also a display of the educational institutions of the country, including the handiwork done by seminary girls.

Conversion of Mexican Debt.—Ambassador Clayton writes from Mexico, under date of June 8, 1899, in regard to the conversion of the foreign or gold debt of the Republic of Mexico. A 5 per cent loan has been effected for £23,000,000 (\$111,929,500), guaranteed by the customs, redeemable in forty-five years and inconvertible for ten years. The bonds are to be taken in England, Germany, and the United States—the larger part in Germany, on account of the fact that most of the old debt was held by the Germans. The foreign debt formerly earned 6 per cent interest.

Export of Silver from Salvador.—Under date of May 21, 1899, Consul Jenkins, of San Salvador, writes that a decree has been issued by the President, according to which the laws prohibiting the export of silver coin and bars, enacted by the National Assembly on March 18 and 20, are to be suspended until the meeting of the next Assembly.

* The letter has been forwarded to the firm.

Pearl Fishing in Venezuela.—Consul Plumacher sends from Maracaibo, May 2, 1899, copy of a recent decree of the Department of Agriculture, Industry, and Commerce of Venezuela, according to which the North American Sucking Company is to be allowed to examine the pearl beds existing on the coast. In former years, says the consul, the pearl fisheries on the Spanish main were celebrated, and the products were valuable. Fishing with rakes is prohibited. A report is to be made to the Government, and the commissioner, Mr. Garcia, is to receive 600 bolivars (\$115.80) per month.

Steamship Line from England to Finland.—Consul Metcalf, of Newcastle-on-Tyne, under date of May 19, 1899, reports the recent establishment of a weekly line of steamers from that port to Finland, carrying passengers, mails, and freight. One steamer has already arrived at Newcastle with above 200 emigrants on board, en route for the United States.

FOREIGN REPORTS AND PUBLICATIONS.

Commerce in Abyssinia.—An article in the *Moniteur Officiel du Commerce*, Paris, February 9, 1899, is summarized as follows:

Harar is the great commercial center of Abyssinia, with a population of 40,000, of which 1,000 are foreigners. A statement of its commerce gives a very good idea of the trade of Abyssinia in general, as all commercial operations within the dominion of Menelik must take place here. Roads penetrating into the interior converge at Harar, and Ethiopian merchants bring to this market the products of the Abyssinian plateaus and of the regions of the south—coffee, ivory, and civet. Purchases and sales are generally effected for cash. The money employed in the country is the Marie-Thérèse thaler, worth from 41 to 46 cents, according to exchange. The only fractional currency is the 2-anna silver piece of British India. The Ethiopians use bars of salt nearly 10 inches long as currency.

The latest statistics give the imports for 1897-98 as follows:

Articles.	Value.	
	<i>Francs.</i>	
Cotton cloths.....	5,872,000	\$1,133,296
Woolen goods and rugs.....	540,000	104,220
Silks.....	249,000	48,057
Food productions.....	439,500	84,824
Arms and military stores.....	3,123,000	602,739
Glassware and beads.....	1,076,000	207,668
Other.....	1,277,000	246,461
Total.....	12,576,500	2,427,265

These imports come chiefly from Germany, England, and Austria via Bombay and Aden. Of the commerce coming by way of Aden, American cotton cloths form a very important factor. The use of these cottons is becoming more and more general, the poorer classes using them entirely. They are imported in pieces of 30 yards in length, and, according to the rates of exchange, the price varies from 75 to 100 thalers for 20 pieces. During the year April, 1897, to April, 1898, 250,000 pieces were imported, valued at 2,500,000 francs (\$482,500). Woolen goods come principally from Germany. Black cloth is used for burnouses and red cloth for saddle blankets. Rugs are imported from the East; also from England and Austria.

Silks come from France, Germany, and Switzerland; they are used chiefly for church ornaments and for the burnoose of the Arab chiefs. Silk is not used ordinarily for dress, except by the warriors. Arms and munitions find a ready sale. The preferred gun is the Gras. On an average from 100,000 to 150,000 of these guns are sold each year. The favorite revolver is the Smith & Wesson, firing the cartridge Winchester of 0.44 caliber. The Abyssinians are great lovers of fine arms, and manufacture a saber bent like a cimeter.

The total exports for 1897-98 are valued in round numbers at 5,835,000 francs (\$1,126,155), as follows:

Articles.	Value.	
	Francs.	
Coffee.....	2,400,000	\$463,200
Ivory	1,000,000	193,000
Civet.....	345,000	66,585
Gold.....	1,400,000	270,200
Wax.....	75,000	14,475
Hides.....	615,000	118,695
Total.....	5,835,000	1,126,155

Two qualities of coffee are sold on the market of Harar—first, the Abyssin. brought by Abyssinian merchants from Kaffa, Leka, and Djimma. The grains are small, like the Mocha, with an earthy appearance, due to lack of care in de-cortication. The market price is 4 to 6 thalers (\$1.84 to \$2.76) the frazella (37¼ pounds); second, the Harari, cultivated in the districts around Harar and in the mountains of the Tchertcher. This coffee, with a longer berry, is better cultivated than the other and finds a ready sale in America and England at the price of 6 to 8 thalers (\$2.76 to \$3.68) the frazella (37¼ pounds).

Ivory is brought from the south for the most part as tribute to Menelik, who uses it, together with gold, to pay for his purchases of arms. Gold is exported in rings of different dimensions and thicknesses, as well as in small cylindrical ingots.

The exportation of hides has diminished since 1890, on account of the epizooty. The Abyssinians employ many skins for making "selitchas," or sacks, for carrying merchandise.

The resources of this country are immense and the fertility of the soil extraordinary. Great tracts of land lie waste, the natives cultivating only enough for their wants. With its regular rainy season from June to September, its terraced mountain lands, its warm and deep valleys, which invite every kind of cultivation from that of the Tropics to that of the temperate zone, this country is capable of becoming one of the richest in the world. Seven-tenths of the uncultivated land from Harar to the boundaries of southern Abyssinia are admirably adapted to the cultivation of coffee. Cotton could also be made remunerative; what is grown is of a very fine quality and is woven by the natives for their togas. The conditions of the country are most favorable for cattle breeding. As soon as the railway from Harar to Djibouti is finished, Harar will become the great supply market of mutton, goats, and cattle for Somali and the countries of the Arabian coast. The native horse is especially valued for his endurance. The mule, small and strong, with great powers of resistance to fatigue and privations, renders inestimable services in this mountainous country, where he carries loads of 100 kilograms (220 pounds). Tobacco grows wild, as well as the olive, sycamore, and fig trees. From the dakoussa plant, beer, a favorite drink of the natives, is made. Honey is found in great abundance throughout all Abyssinia; it is used to make the national drink, the "tech," as well as an excellent quality of brandy.

The duties on exports and imports of all kinds of merchandise are 8 per cent, calculated ad valorem. The packing of goods must follow certain conditions, on account of the transportation by mules and camels. All merchandise, other than liquids, should be in bales and boxes—the latter covered with zinc when the contents are fragile; weight, 50 to 60 kilograms (110 to 132 pounds); shape, elongated.

For liquids, eighteen bottles in a case are preferable; contents of barrels ought not to exceed 50 liters (13.2 gallons); these should have double wrapping of linen.

Importers should not make the mistake of supposing they are to deal with a race of savages; quite the contrary. The Abyssinians are essentially a mercantile people, with their own civilization and business customs, which must be considered.

Trade in Poland.—A British Foreign Office report (No. 2226) on the trade and agriculture of Poland and Lithuania for the year 1898 says in part:

The year 1898 was one of unexampled prosperity for the districts of European Russia, caused partly by the freedom and encouragement given by the Government to all industrial undertakings and partly by the opening up of new markets for local produce in the eastern provinces of Russia and Siberia. During the last forty years, the population of Russian Poland has almost doubled, rising from 4,764,446 in 1858 to 9,445,943 in 1897. From an agricultural point of view, 1898 was an especially good year. The yield of the different cereals was estimated as follows: Wheat, 25,241,880 bushels, or 20 per cent more than 1897; rye, 117,094,400 bushels, or 10 per cent more than 1897; barley 10 per cent and oats 40 per cent more than 1897.

Great progress was made in the textile industry, especially in cotton and linen. On account of its cheapness, much more American cotton is now imported than formerly, though the Egyptian is used for the finer numbers.

Warsaw is the principal center of the tanning industry in Russia. The total value of the output of forty-seven tanneries is over 7,000,000 rubles (\$3,605,000). In close connection with the tanning industry comes the manufacture of boots and shoes. These are famous all over Russia for their lightness, cheapness, and durability. On account of the cheapness of labor, the machine-made article can not compete with the handmade.

There is an opening for agricultural machinery, owing to the increasing difficulty of finding farm laborers, and also to the fact that the peasants prefer to work in factories or to go abroad, where wages are higher. From statistics published by the committee of Russian sugar manufacturers, the production of beet root was 116,539,850 cwts. in 1898, as against 121,326,420 cwts. in 1897. The area under cultivation was much greater; but, owing to the sudden cold in October, there was a partial failure of the crop.

In the iron and steel industry, the supply does not equal the demand. The total production of iron for 1898 is put down as follows:

Description.	Quantity.	
	<i>Poods.</i>	<i>Pounds.</i>
Lithuania	62,700	2,264,222
Poland	15,887,312	573,722,611
All Russia.....	133,000,000	4,802,896,000

The import of iron from abroad during the first six months of 1898 was 16,824,000 poods (607,548,288 pounds). All works are overwhelmed with orders, some having contracts for five or six years ahead; so that terms for delivery are in many cases twelve to eighteen months. The United States, owing to its shorter

terms for delivery, is commencing to compete successfully in machinery, tools, and rails.

During the year 1898, there was a steady rise in the price of coal, due not to its scarcity, but to the rapid industrial development of the country and to the fresh demand created by the new forest preservation act, according to which railway engines are no longer allowed to use wood fuel. The output of the Polish coal pits was 4,026,883 tons in 1898, an increase of 11.3 per cent over the preceding year. The Government has decided to use British coal for railways, of which there are 1,200 miles in operation.

Bicycles in Siam.—The *Moniteur Officiel du Commerce* of Paris, in its edition of April 27, 1899, says:

Almost simultaneously, American and English firms have placed numerous models of their manufactures on the market at Bangkok. At the present time, not only is the bicycle met everywhere in the streets of the capital, but it has also penetrated into the interior. Europeans are not the only ones seen on bicycles; the Siamese and even the Chinese, in spite of the inconvenience of their form of dress, have readily adopted this mode of locomotion. The success of the bicycle is general in the Orient. The majority of machines now used in Siam are American, English, or German makes; a few French and Belgian are also seen. The demand for American wheels is strong, as they have the reputation of solidity as well as cheapness. These are the two conditions of success on the Bangkok market. A machine of 14 kilograms (30.8 pounds) is considered too heavy in Siam, where the heat is excessive. Wooden felloes will not resist the action of the air and the dampness of the climate. Rubber pedals are preferred, as many Siamese and Japanese ride without shoes or sandals. All machines should be accompanied by duplicate parts. The import duty on bicycles in Siam is 3 per cent ad valorem. The importers are: Schmidt, Fertch et Cie.; the firm Kiam Hoa Heng et Cie.; Ch. Knider; Falk & Beidek; P. Arinet; Lake & Co.; and Alibhai & Chandafhai.

United States Competition in the Argentine Republic.—The following paragraph is from a letter from Buenos Ayres to the *British Trade Journal*, London, April 1, 1899:

American competition is very keen. There are a number of American houses here which do a large business and are very much in evidence by their energetic and enterprising methods. Some of these houses sell on commission, on a large scale, in the following manner: They have a connection with a New York house of good standing, through whom they make transactions. The New York house generally being influential can obtain goods on credit, and samples of these are sent to the Buenos Ayres house; or, if the articles are not too bulky, a stock is sent on consignment. The Buenos Ayres house has large showrooms, where a regular museum of American articles is exhibited, such as safes, agricultural implements and machinery of every description, bicycles, and a great variety of those ingenious inventions for which our trans-Atlantic cousins are famous. The greater part of these articles are not for sale, but are merely samples sent on exhibition, and from these local dealers place their orders. The advantages of this system are that it brings to the notice of the dealers a large variety of goods which would never be sold in the ordinary way. It has its disadvantages also, as prices are much enhanced, owing to the the number of commissions that have to be paid before the goods reach the consumer.

Agricultural Machines in Argentina.—The following is taken from the *Moniteur Officiel du Commerce*, Paris, March 23, 1899:

The rapid development of the cultivation of cereals and lucern grass in the Argentine Republic has made an important opening for agricultural machines of every kind. The following table shows the machines most in use in Cordoba, the countries of production, and price:

Plows, American:

No. 1½	each...	\$4. 34
No. 2½	do.....	4. 83
No. 3½	do.....	6. 27

Cornshellers, American:

Virginia.....	do.....	27. 00
Clinton (hand machine)	do.....	5. 79

Scythes, French.....per dozen... \$4. 83 to 5. 79

Shovels:

American	do.....	6. 47
English	do.....	4. 83

Picks and pickaxes:

American—

Collins.....	do.....	13. 50
Colorado.....	do.....	2. 60

French—

Pengeot.....	do.....	3. 38
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Rakes, machine, for lucern grass (Osborn, American) each... 32. 80

Hand rakes, American.....per dozen... 2. 12

Reapers:

English—

Albion No. 5.....	each...	67. 55
Albion No. 7.....	do.....	77. 20

American—

Osborn.....	do.....	67. 55
Eureka.....	do.....	106. 00

Thrashers and drillers find little sale at Cordoba. Cheap machines will find a more ready market than high-priced ones. The rural proprietors are speculators rather than farmers, and attach little importance to high finish and durability.

Germany in Shantung.—The following appeared in the *London and China Telegraph*, London, June 12, 1899:

The negotiations between the Imperial German Government and the Shantung Syndicate for railway and mining concessions have been concluded, and as a result the various interested groups have amalgamated. The construction and working of the railways will be carried out as much as possible with German capital. As we have already intimated, the first line to be constructed will be that from Tsintau, via Weihsien, to Tsintau-fu, with a branch line to Poshau. This line must be finished in five years and the first portion to Weihsien in three years. Till 1908 the syndicate has the option of undertaking lines from Tsinan-fu to Ichow-fu, and from Tsintau to Ichow-fu. The former of these two lines is hardly likely to be carried out, now that the Anglo-German agreement with regard to the Tientsin-Chinkiang Railway has been arrived at. The syndicate has the right to search for

minerals and apply for claims within a limit of 30 li (12 miles) on both sides of the line. But this right must be exercised within five years and the claims must be properly worked within ten years of their assignment to the company. The total area taken in claims may not exceed half the area of the 30-li (12 miles) zone at the end of twenty years. The German navy is to have a preference in the produce of the coal mines. The railways will have to carry the Government mails free of charge. The syndicate must allow other undertakings to build branch lines outside of the 12-mile limit. The capital for building and working the lines has been fixed at 54,000,000 marks (\$12,852,000).

The Imperial Government has succeeded in obtaining very considerable privileges for itself, as compensation for its expenses in administering the country and in creating the harbor at Kyao-chau.

As soon as the dividend exceeds 5 per cent, the Imperial Government is to receive one-twentieth of the excess up to 7 per cent, one-tenth of the excess over 7 and under 8 per cent, and so on up to 12 per cent, after which the Government gets half the profits. After sixty years, the Government has the right to buy up the railways.

Chamber of Commerce at Manila.—The London and China Telegraph, London, June 12, 1899, says:

Commercial circles at Manila have taken advantage of the political and economical reforms which are now being effected in the island in order to organize themselves as a body, hoping thus to gain more influence and authority than has hitherto been possible under the Spanish régime. In former times, every member of the chamber entitled to vote had to be a Spanish subject. Foreigners were only admitted in a consultative capacity. Recently, at the initiative of certain British subjects, a new chamber of commerce was called into existence. The statutes contain the same stipulations as are customary with similar bodies, namely, to watch and protect the general interests of trade and commerce, to gather information, to give advice, and even to act as referee and arbitrator in commercial matters. It is being managed by a committee of thirteen members, five of whom must be importers and five exporters; one acts on behalf of the banks and two represent the industrial and maritime circles, respectively. Owing to the supremacy of British trade in the Philippines, the members of the first committee are almost exclusively British. Altogether, the creation of the chamber of commerce signifies notable progress and great advantage to trade and industry in the Philippines.

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